TARGET

DOCTOR WHO DISCOVERS

EARLY MAN

50p

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EARLY MAN

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DOCTOR WHO

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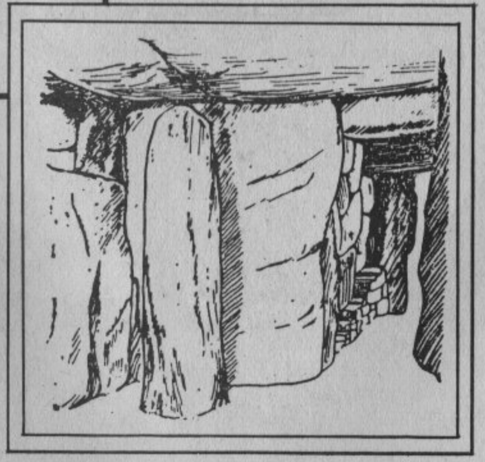


INTRODUCTION

Around twenty million years ago the first of the apes began to come down from the trees and forage cautiously for food around the edge of the African forests. But it was many millions of years after that when ape-men learned to walk on two feet.

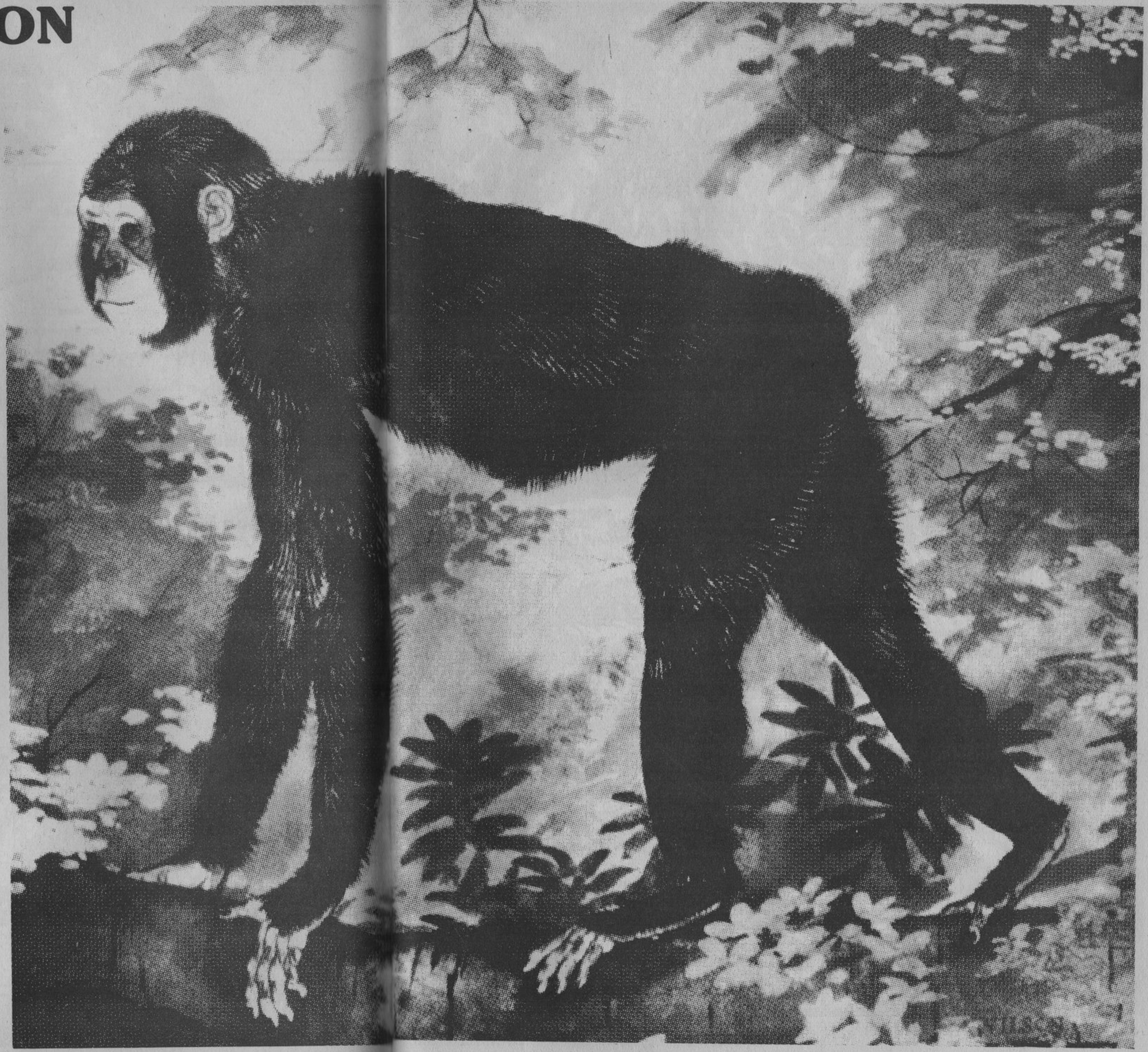
These fur-covered hominids were the ancestors of man, but as the Doctor discovers, following the trail of human evolution, the oldest trace of man himself goes back not more than two million years.

Early man did not arrive in Britain until half a million years ago, and soon he was driven out by the advancing glaciers and cold of the Ice Age.

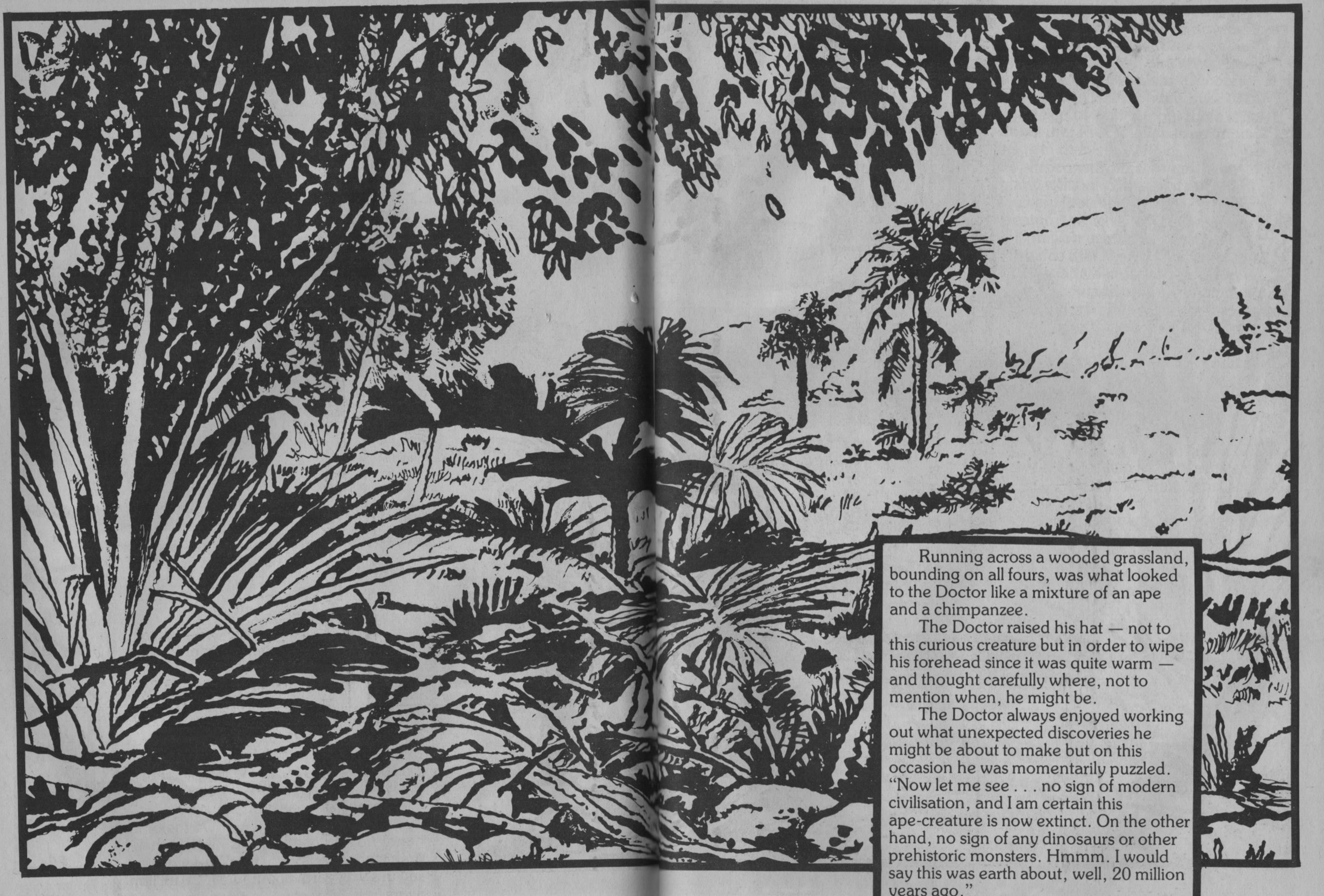
In "Dr. Who Discovers Early Man" you can join the Doctor in his fascinating and sometimes dangerous journey while he glimpses, with the help of the Tardis, early man's struggle for survival.

What kind of tools did he have? Why did he paint on the roof of caves? What kind of clothes did he wear and what strange customs and beliefs did he hold?

Now you can join the Doctor as he finds out the answers to these and many other questions about the life of the earliest men in the world.



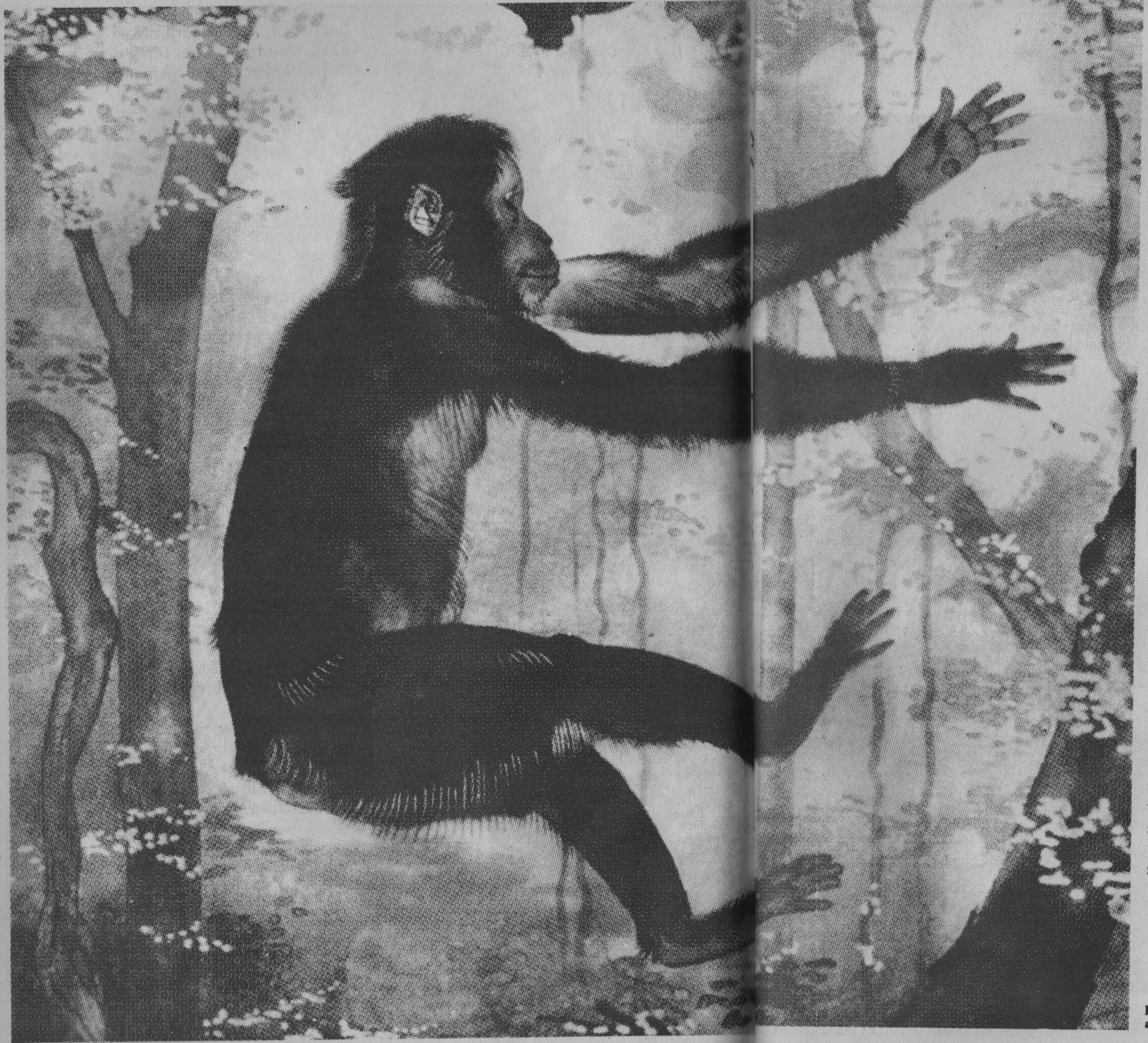
Oreopithecus, an ape-like creature which lived 10 million years ago.



Running across a wooded grassland, bounding on all fours, was what looked to the Doctor like a mixture of an ape and a chimpanzee.

The Doctor raised his hat — not to this curious creature but in order to wipe his forehead since it was quite warm — and thought carefully where, not to mention when, he might be.

The Doctor always enjoyed working out what unexpected discoveries he might be about to make but on this occasion he was momentarily puzzled. "Now let me see . . . no sign of modern civilisation, and I am certain this ape-creature is now extinct. On the other hand, no sign of any dinosaurs or other prehistoric monsters. Hmmm. I would say this was earth about, well, 20 million years ago."



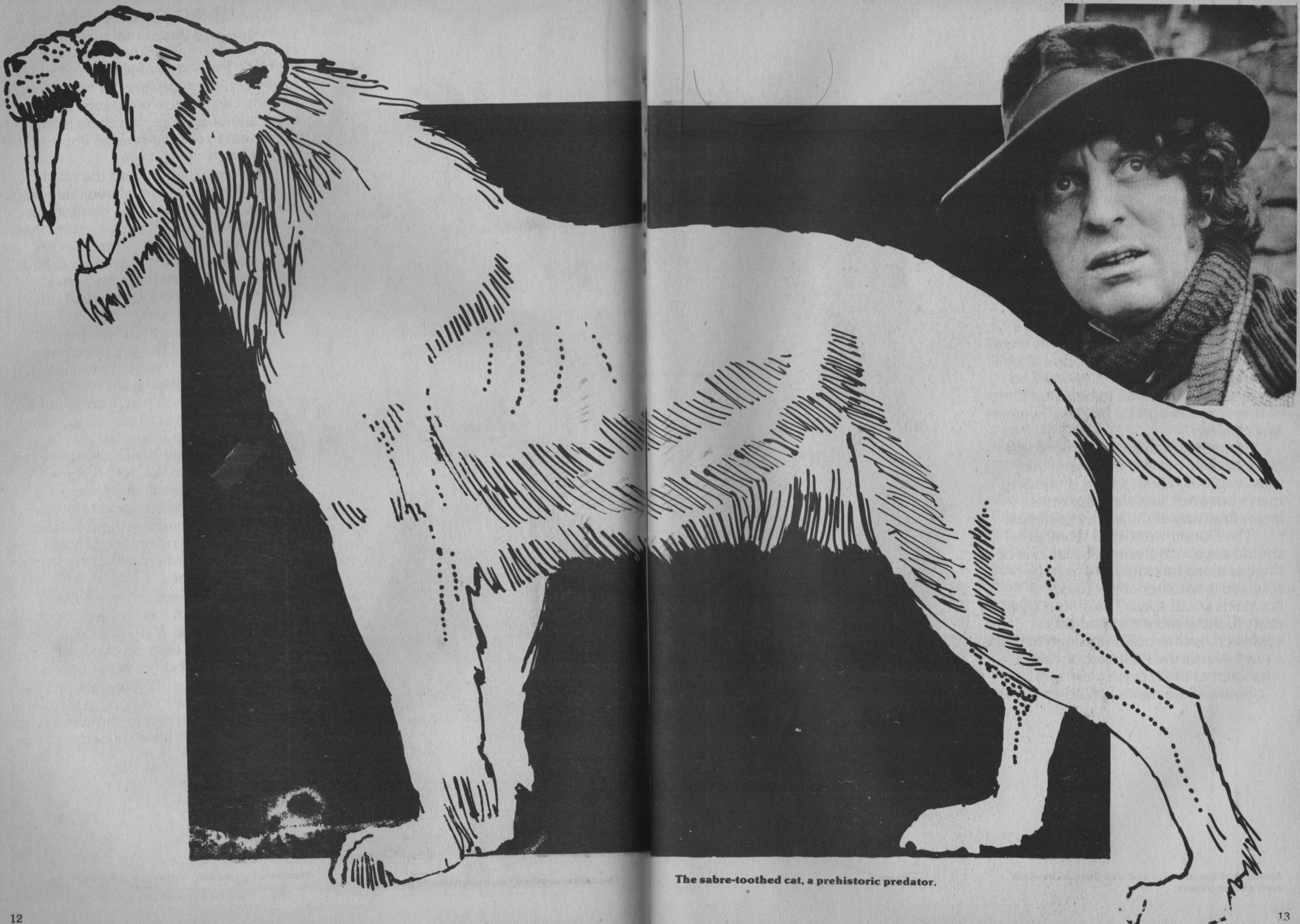
The Doctor was hardly a million years out, and the animal now bounding away into the thicker trees was very probably Proconsul africanus, one of man's earliest ancestors. Of course nobody can be absolutely sure of the exact line of descent, but there is little doubt that Proconsul was an important stage in man's evolution.

Proconsul himself was the result of many millions of years of evolution from the very first mammals — small shrew creatures which lived in trees more than 100 million years ago. There was no evidence that he ever existed until fifty years ago, when some of his bones were discovered on a small island in Lake Victoria, Kenya.

The Doctor watched with great interest as more of the species came running past. They were quite cautious, as was to be expected from animals which were just making a transition from living mostly in trees to foraging on the ground. Since the Tardis had so fortuitously brought the Doctor back to a point in time when the very first men were about to make their appearance it seemed too good an opportunity to miss. Leaping forward several million years, but remaining on the African continent, the Tardis allowed the Doctor to meet a man-ape.

As the apes began to leave the forests in search of food a very important change took place. Very gradually some of them began to walk on two legs. There may have been a very good reason for this; standing upright enabled the apes to see over the long grasses and spot the approach of any carnivorous predators, such as lions, hyaenas or the sabre-toothed cat.

Proconsul africanus, one of man's earliest ancestors.



The sabre-toothed cat, a prehistoric predator.

The skeletons of a species called Australopithecus — meaning Southern Ape — show that these were indeed early hominids. The best evidence for this is their teeth, which were human in shape, and their hip bones were very similar to ours.

The Doctor emerged cautiously from the Tardis, since he didn't want to make a meal for some hunting wild animal.

By a stream in the distance was a group of Australopithecines. They were about 4 feet tall, and their bodies were covered in thick fur, but they wore no clothes. There seemed to be about thirty of them, and the group included women and children.

From their remains anthropologists have worked out that the size of their brain was only about a third of modern man's but even so it was very much larger than any of the earlier primates.

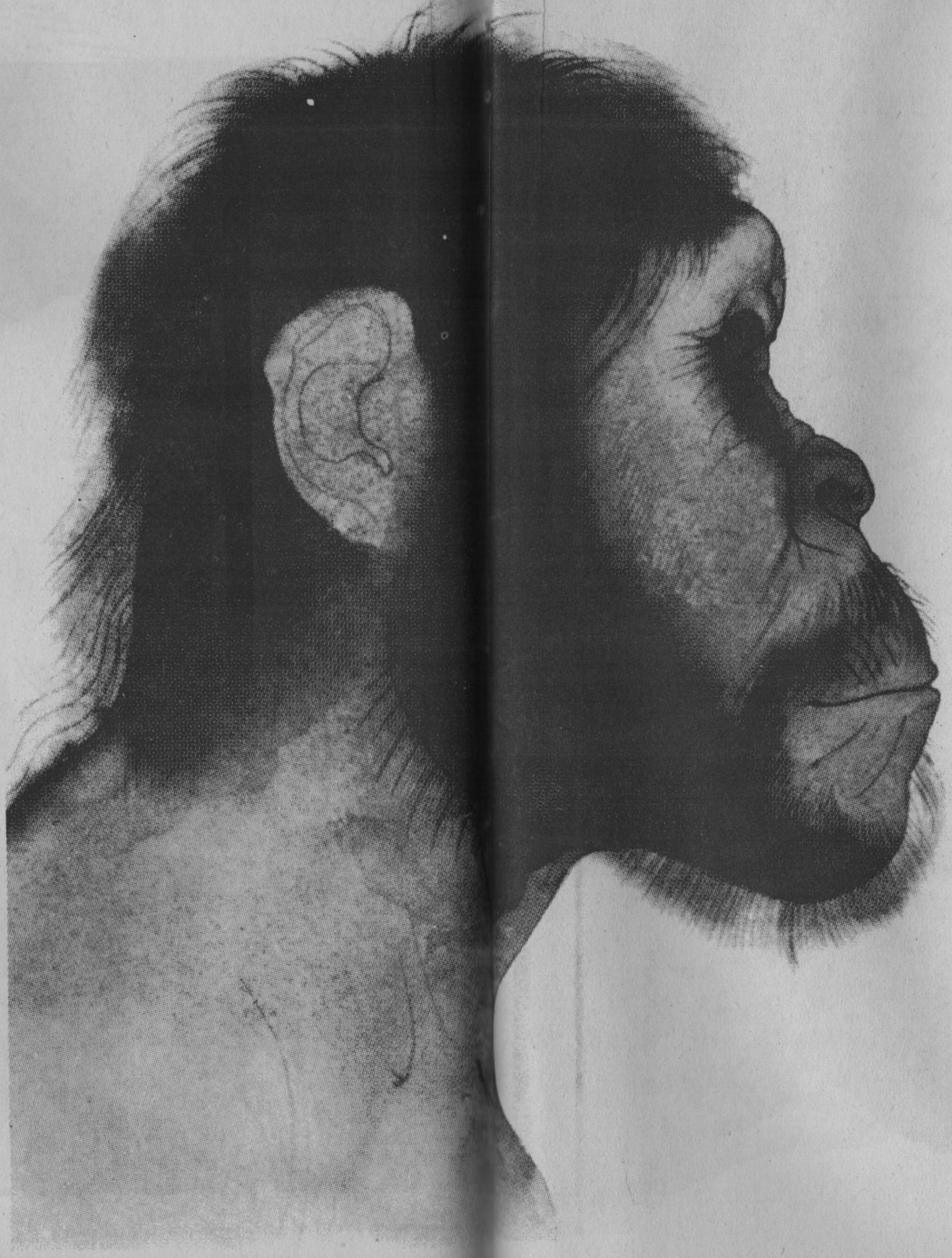
The Doctor wondered whether he should approach closer because one of the questions he would like to have resolved is whether or not these hominids could speak? Just then a very nasty looking sabre-toothed cat appeared over a rock and began to make a run towards the Australopithecines, who leapt to their feet in alarm.

Some of the males picked up stones and hurled them at the cat, while others picked up animal bones which they obviously used as clubs. Eventually they managed to drive the beast away, but the scene made the Doctor decide that he would not be too welcome either. Anyway he thought it better not to risk it!

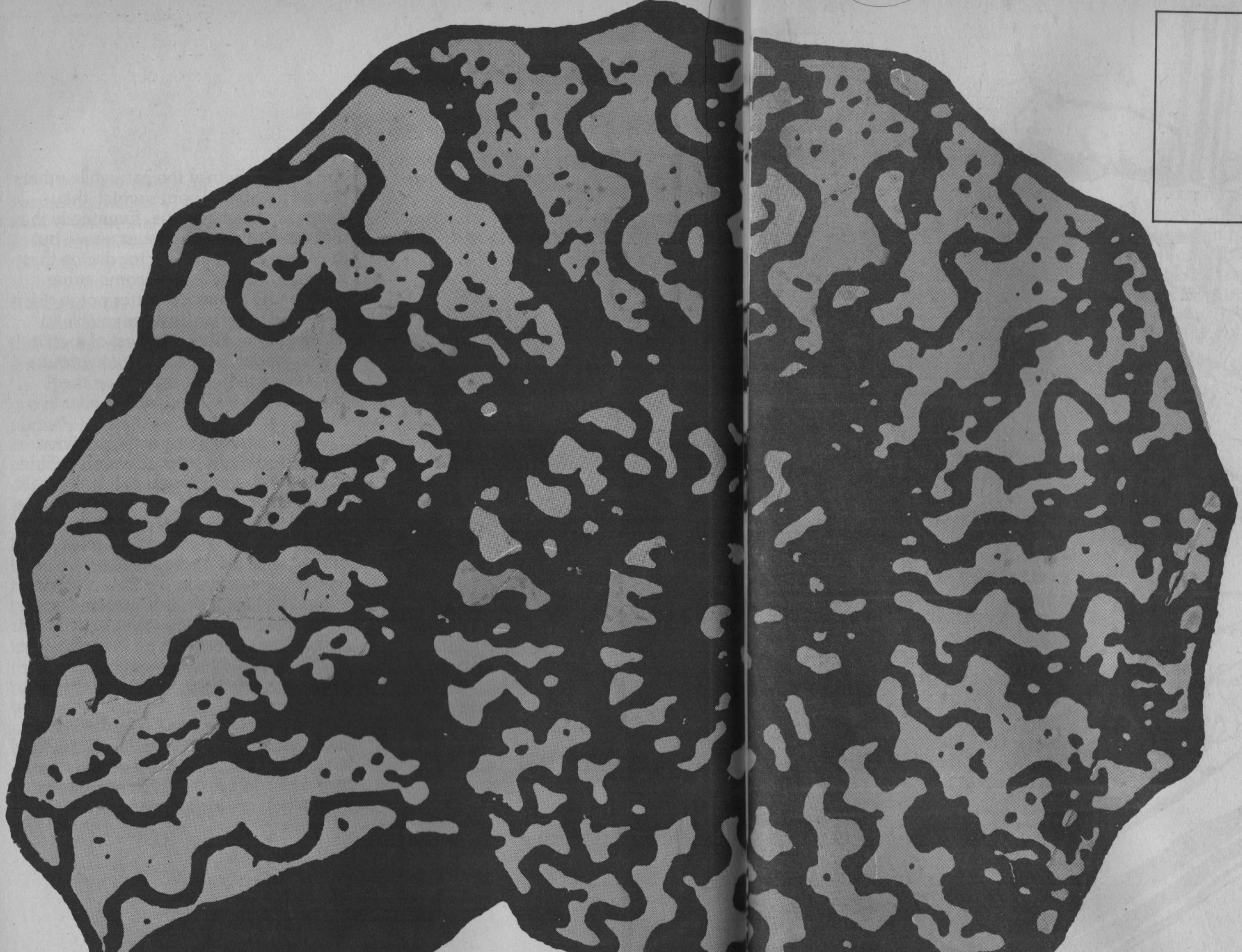
From what we have been able to discover about these earliest of men it seems they wandered about in groups from place to place, and when the weather was bad they took shelter in caves.

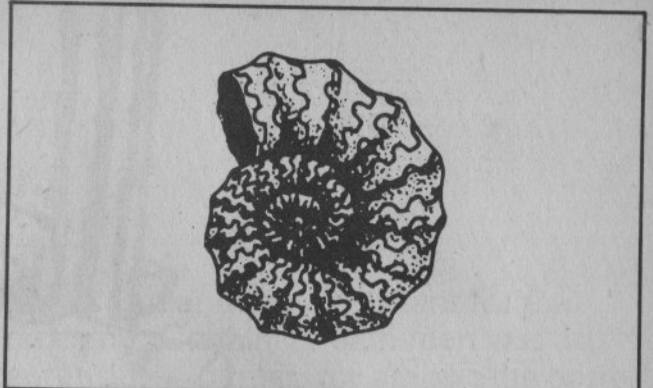
They had only the most primitive 'pebble tools,' just smooth round pebbles about the size of a tennis ball with small pieces chipped off at one end to make a sharp edge. They ate fruits, nuts and berries which the women collected. From bones discovered in the mud of dried up lakes, we know they also ate things like bats, fish, tortoises and young antelopes, which they skinned with their pebble tools. But since no evidence has been found that Australopithecus ever discovered fire they must have eaten everything raw.

"Try and imagine," said the Doctor, safely back inside the Tardis, "How hard life would be if you had to get up every morning and catch or pick everything before you could eat — and raw, too."

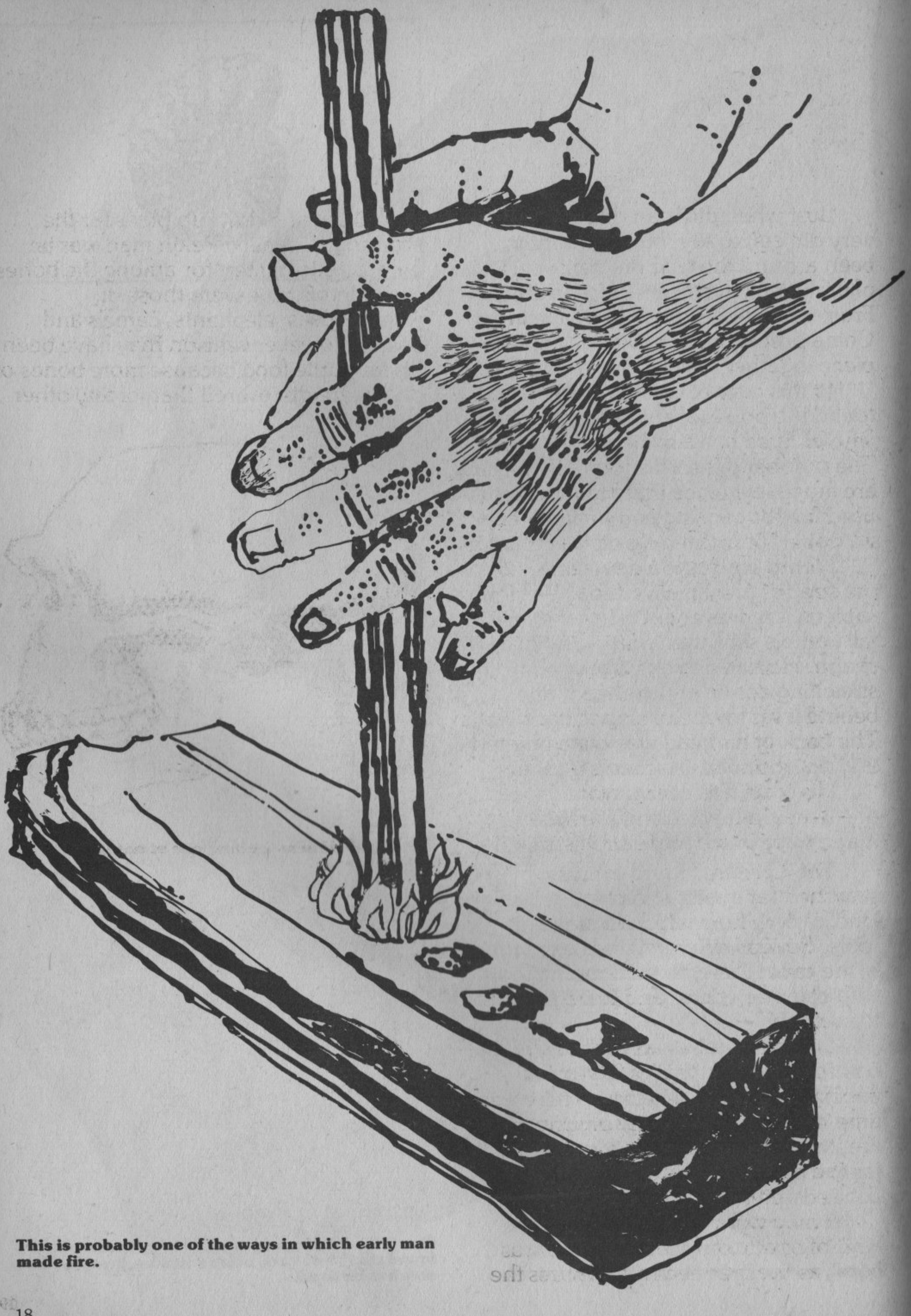


Australopithecus, who had one third of modern man's brain power.





Fossils like these, many thousands of years old, found alongside early man's remains, provide clues on when he lived.



This is probably one of the ways in which early man made fire.

Just when **did** man discover fire? It is very difficult to say, but it must have been around the time the next species of early man evolved — Homo erectus. From discoveries made in a cave in China prehistorians have been able to piece together how Homo erectus lived.

In this cave at Choukoutien were found the bones of about forty people who all lived half a million years ago. The number of hearths found in the cave are ample evidence that Homo erectus used fire for cooking and heating, and no doubt for frightening off wild animals.

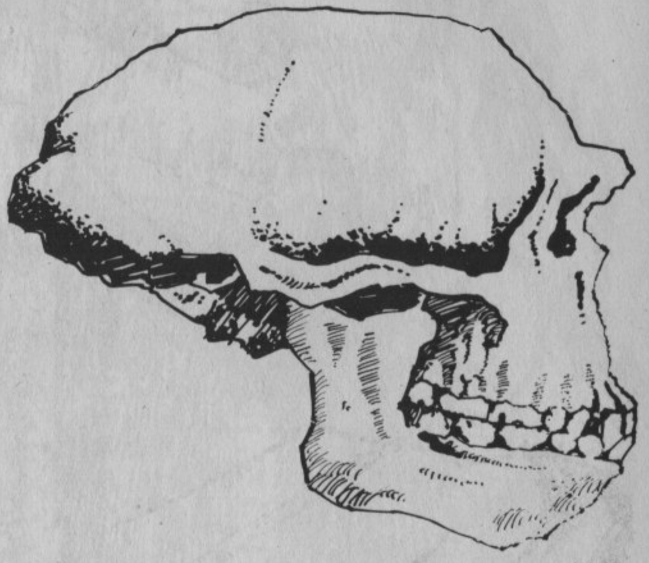
Homo erectus is a direct ancestor of the species of man alive today — Homo sapiens. He was about 5 feet 7 inches tall and his skull was a very distinctive shape. He had a thick ridge of bone stretching across his forehead, and behind it his forehead sloped backwards. The back of his head was quite pointed, and not rounded like man's is today.

His brain was nearly twice the size of Australopithecus, and the tools he made were much more sophisticated.

The Chinese Homo erectus searched for quartz and chert, which is a kind of flint, from which to make his tools. Several different kinds were found in the cave; there were chopping tools with chipped edges, and knife-like tools for cutting.

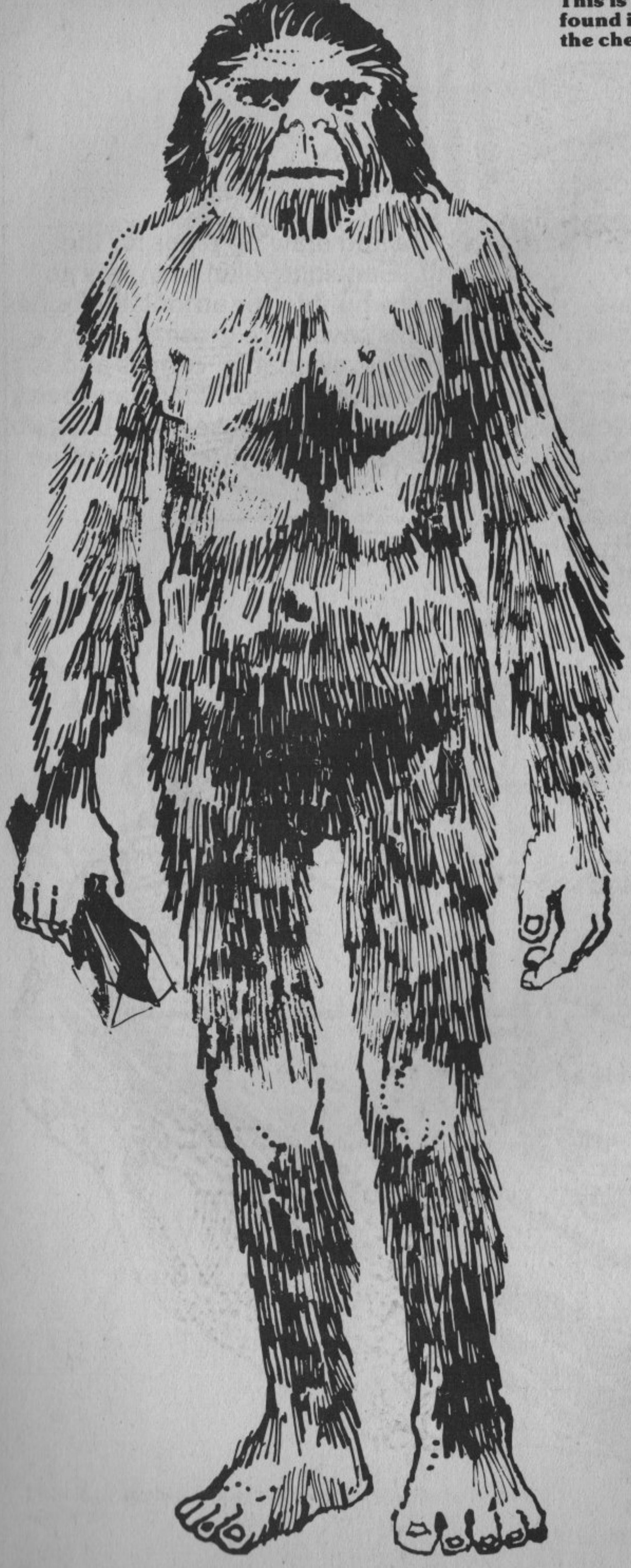
Life in the cave was probably more comfortable than that of any of the ancestors of Homo erectus. There was time in the evenings to sit around the fire, to sharpen the tools in readiness for the next day, and to savour the cooked venison.

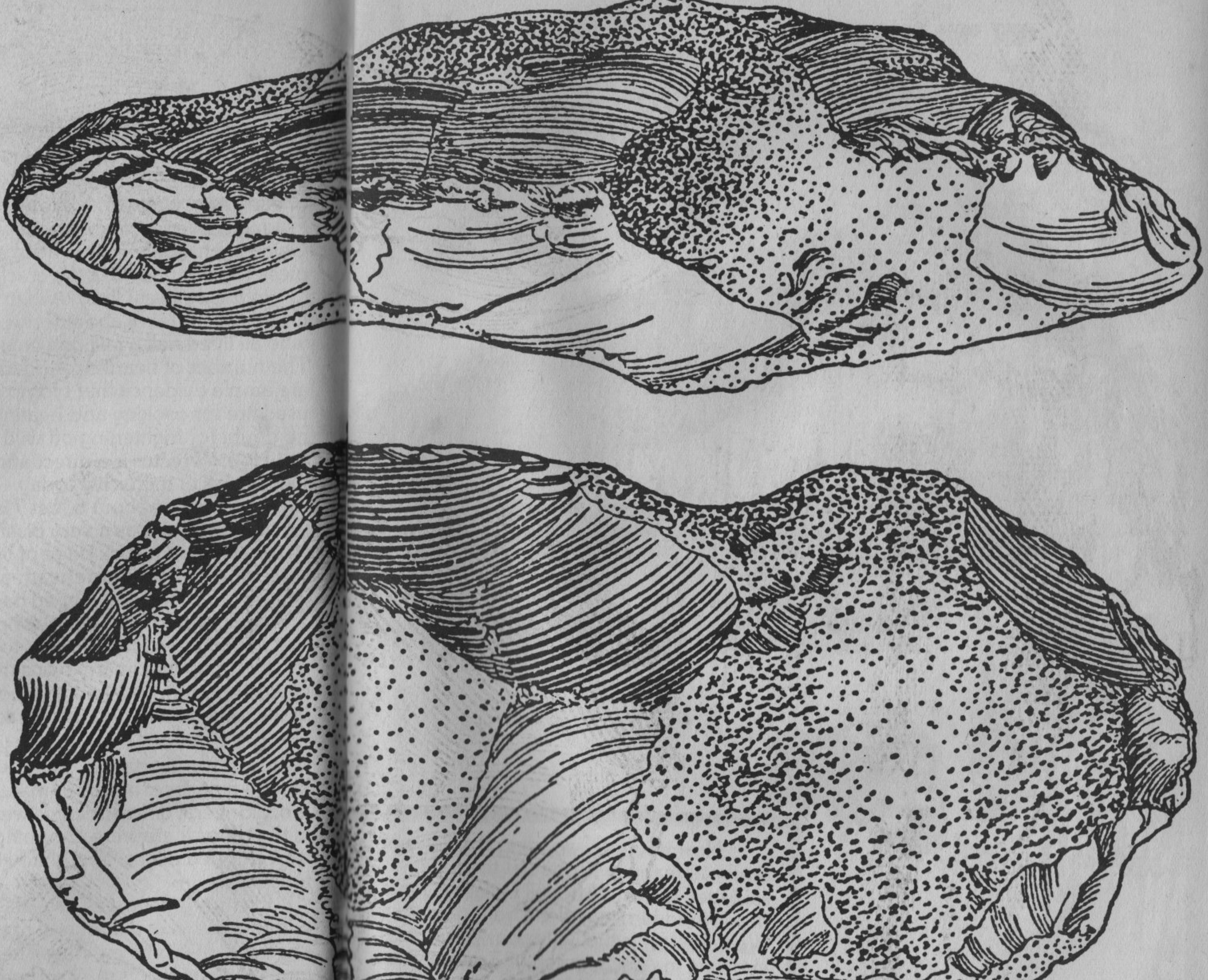
It may well be that it was in these kind of conditions that language was born, as the men began to discuss the day's hunt and draw up plans for the morning. Certainly Pekin man was an enthusiastic hunter, for among the bones found in his cave were those of rhinoceroses, elephants, camels and bears. However venison may have been his favourite food because more bones of deer were discovered than of any other animal.

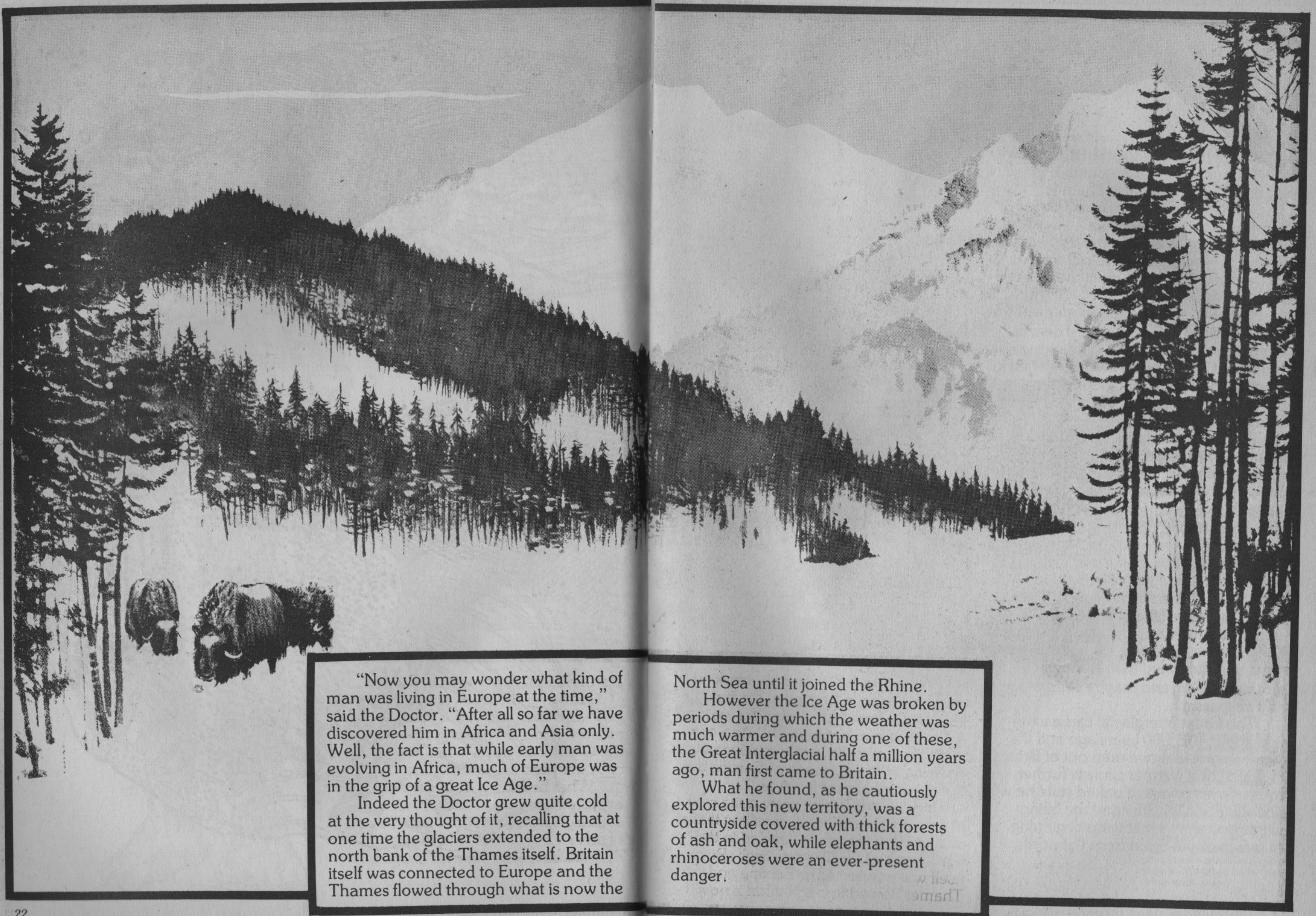


The skull of Homo erectus, one of our direct ancestors.

This is Homo erectus, whose remains have been found in a cave in China. Also illustrated are two of the chert or flint tools which he used.







"Now you may wonder what kind of man was living in Europe at the time," said the Doctor. "After all so far we have discovered him in Africa and Asia only. Well, the fact is that while early man was evolving in Africa, much of Europe was in the grip of a great Ice Age."

Indeed the Doctor grew quite cold at the very thought of it, recalling that at one time the glaciers extended to the north bank of the Thames itself. Britain itself was connected to Europe and the Thames flowed through what is now the North Sea until it joined the Rhine.

However the Ice Age was broken by periods during which the weather was much warmer and during one of these, the Great Interglacial half a million years ago, man first came to Britain.

What he found, as he cautiously explored this new territory, was a countryside covered with thick forests of ash and oak, while elephants and rhinoceroses were an ever-present danger.

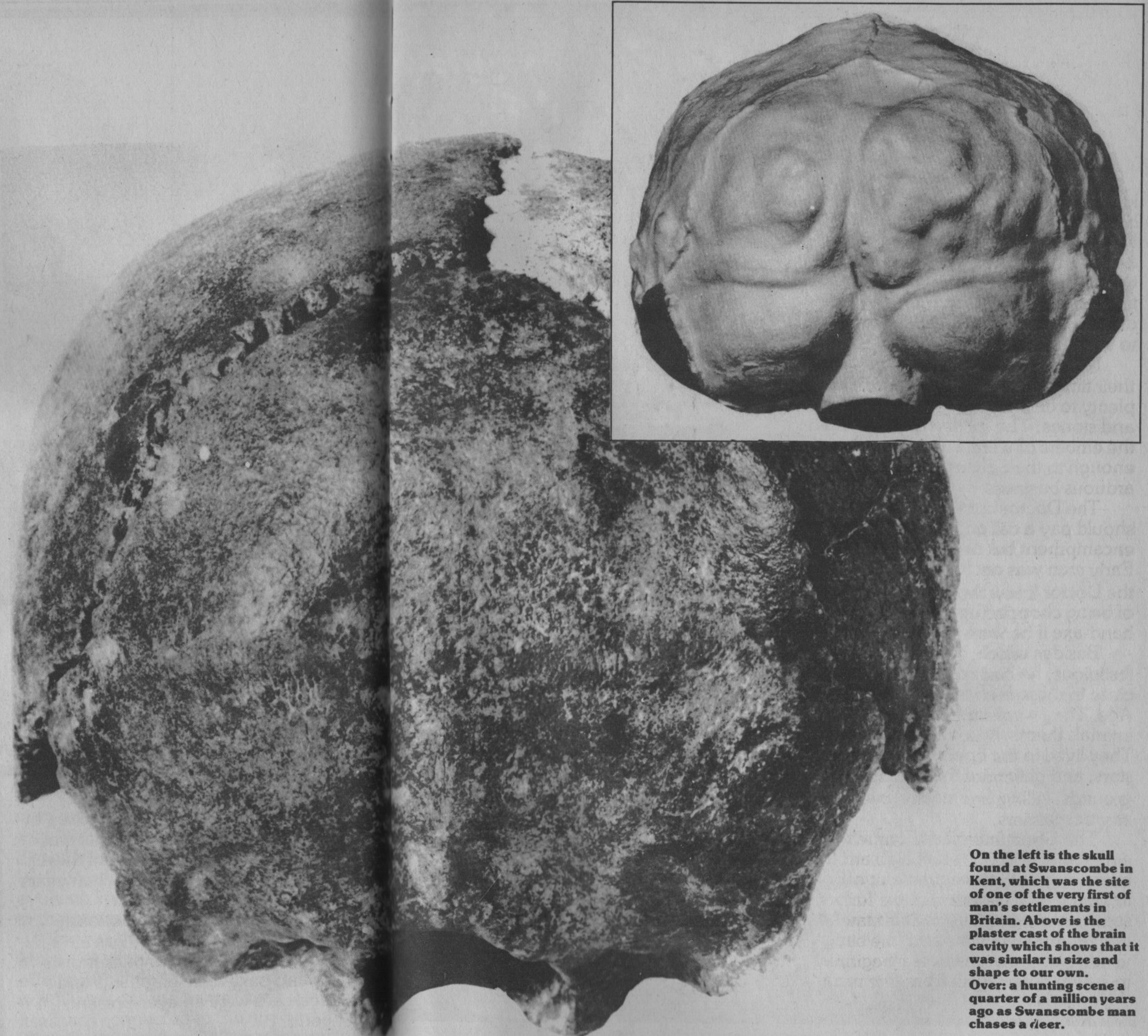
One of the first settlements which we know about was at Swanscombe, in Kent, on the banks of the Thames. Here were discovered the fossil bones of a woman who died when she was about twenty years old. From what the remains tell us it seems that she was not very different in size of brain or shape of head to a woman living today.

No doubt the menfolk spent most of their time hunting. There were deer in plenty to be chased with wooden spears and stones. The spears they hardened in the embers of a fire, but getting close enough to their quarry was a long and arduous business.

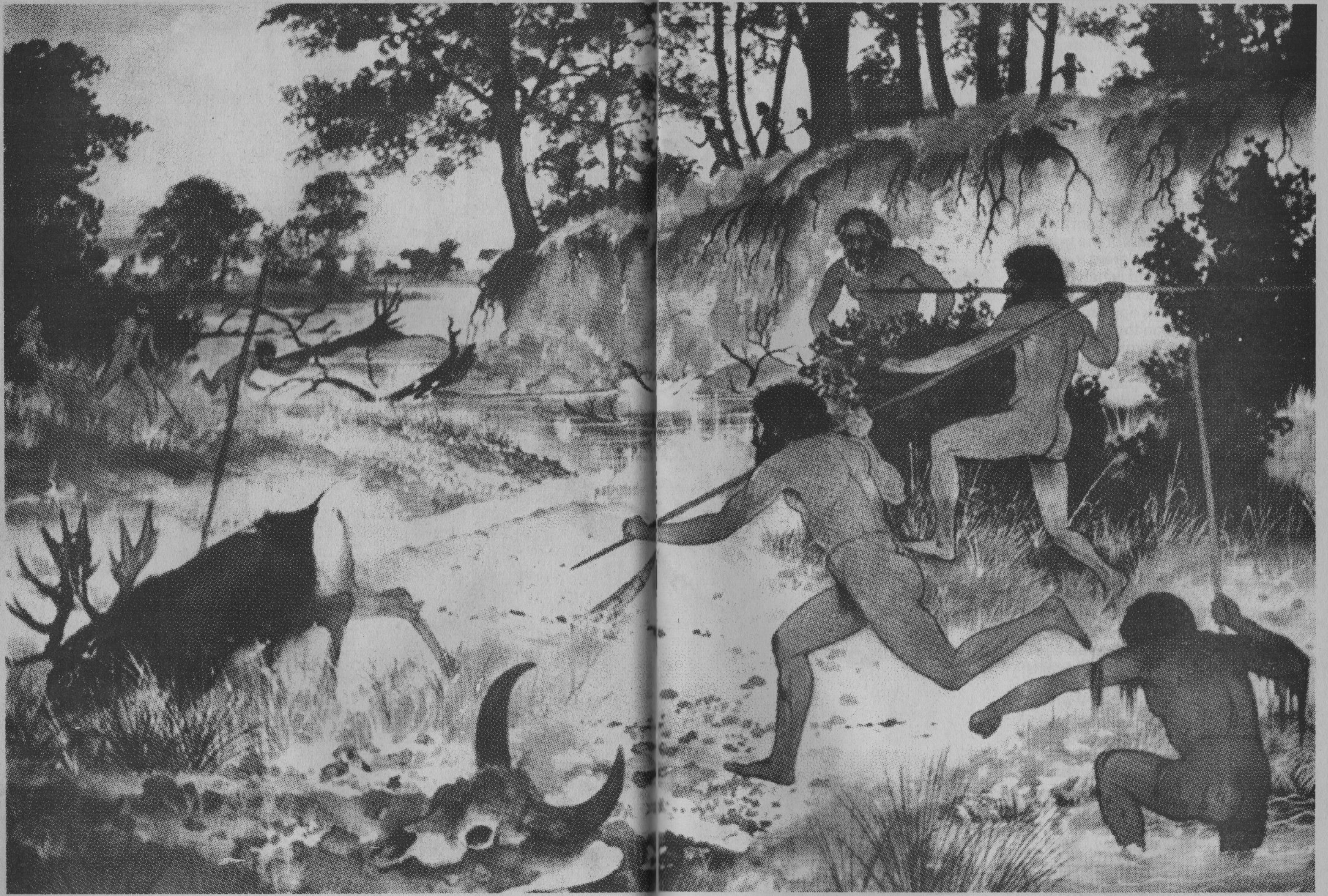
The Doctor considered whether he should pay a call on the Swanscombe encampment but decided against it. Early man was not fond of strangers, and the Doctor knew there was every chance of being chopped up with a flint hand-axe if he were caught.

Besides which, being somewhat fastidious, he had no wish to get too close to these men of the early Stone Age. They were little better than wild animals themselves, and stank like them! They lived in the open, slept under the stars, and defended their hunting grounds, killing and maybe even eating any trespassers.

The Great Interglacial came to an end about 400,000 years ago and the increasing cold drove man out of Britain in search of a warmer climate further south. In his primitive naked state he was not equipped to withstand the biting winds and snows that were beginning to sweep down again from the north.



On the left is the skull found at Swanscombe in Kent, which was the site of one of the very first of man's settlements in Britain. Above is the plaster cast of the brain cavity which shows that it was similar in size and shape to our own.
Over: a hunting scene a quarter of a million years ago as Swanscombe man chases a deer.



Although the return of the ice drove early man from Britain, and kept him out for thousands of years, elsewhere in Europe another type of man was learning to acclimatise himself to the long cold periods of the Ice Age.

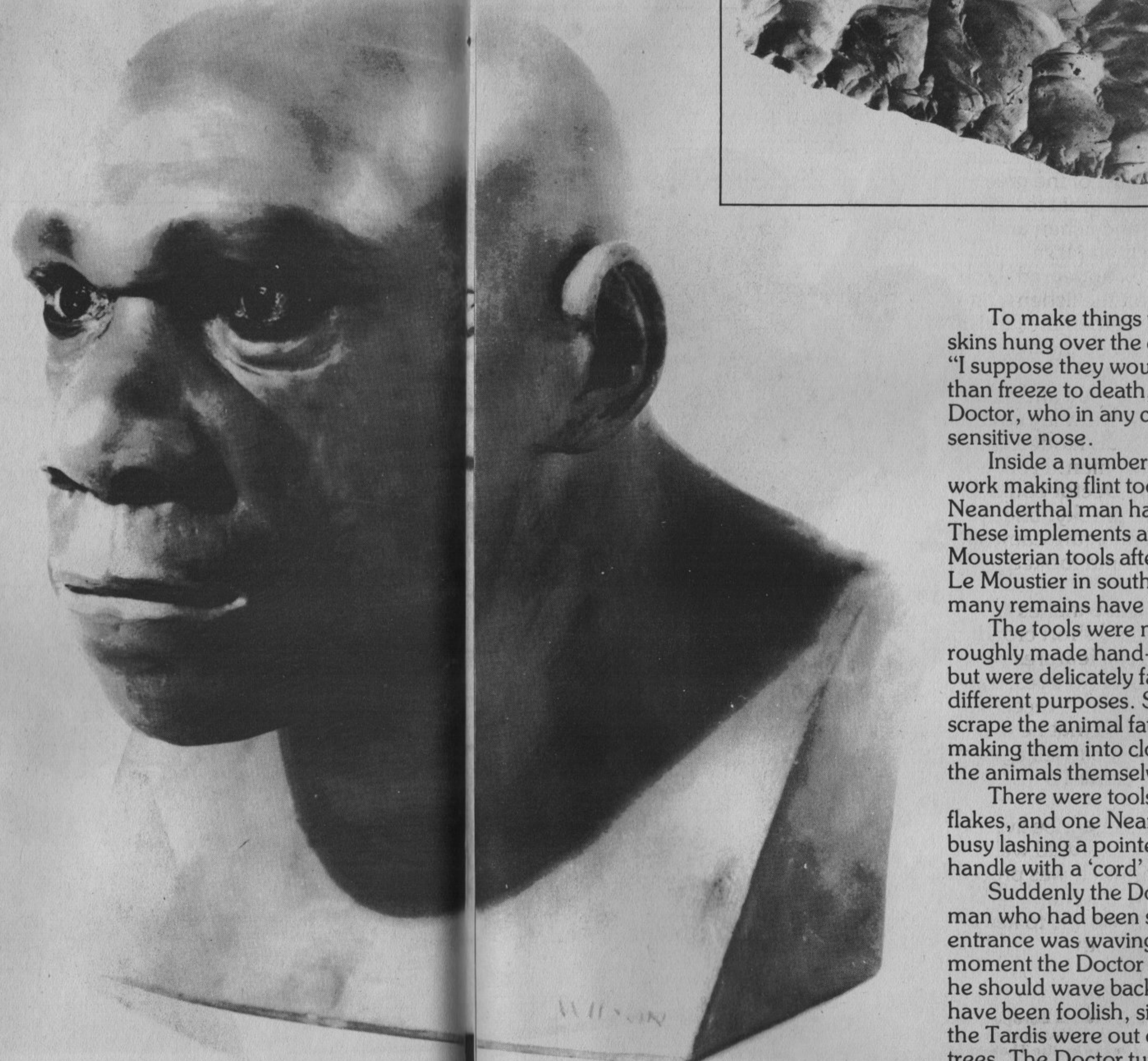
Neanderthal man first lived in Europe 100,000 years ago. He came by the name when his bones were found in a cave in the Neanderthal valley near Dusseldorf, in Germany.

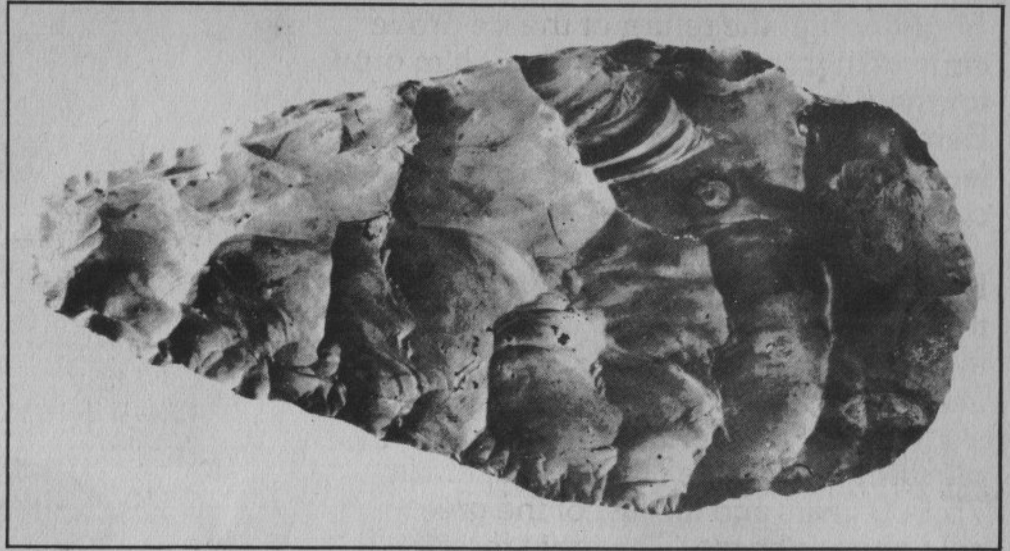
At first Neanderthal man lived in a pleasant, temperate climate, but about 75,000 years ago the last of the great cold periods began. The great forests perished in the cold, and lichen and short grasses grew in their place. Reindeer and musk-ox appeared, both of which could feed on the lichens, and the great mammoth roamed the lands, protected from the cold by the thick hairy coat it had developed.

It was a particularly grey and bleak day, and a covering of snow lay over the countryside, as the Tardis landed in this Europe of Neanderthal man. From a cave in the hillside the Doctor could see smoke curling up into the sky, and then a stocky, tough looking figure came to the mouth of the cave and looked carefully around.

He was about 5 feet 6 inches tall, with powerful hands and short broad fingers. His most striking features were thick ridges of bone over his eyes, a large flat nose and a big jaw with a receeding chin. The Doctor noticed that he was wearing skins to protect himself against the cold, and that he carried a stone-tipped spear.

Evidently quite a large tribe lived in the cave, and the Doctor could well imagine the scene inside. It was probably very stuffy and smoky, but the fire was kept alight constantly to keep off animals and for warmth.





This is Neanderthal man who lived in Europe about 75,000 years ago. Note the ridge of bone above his eyes. Top: A flint hand-axe found by the Thames at Maidenhead. Over: a Neanderthal family.

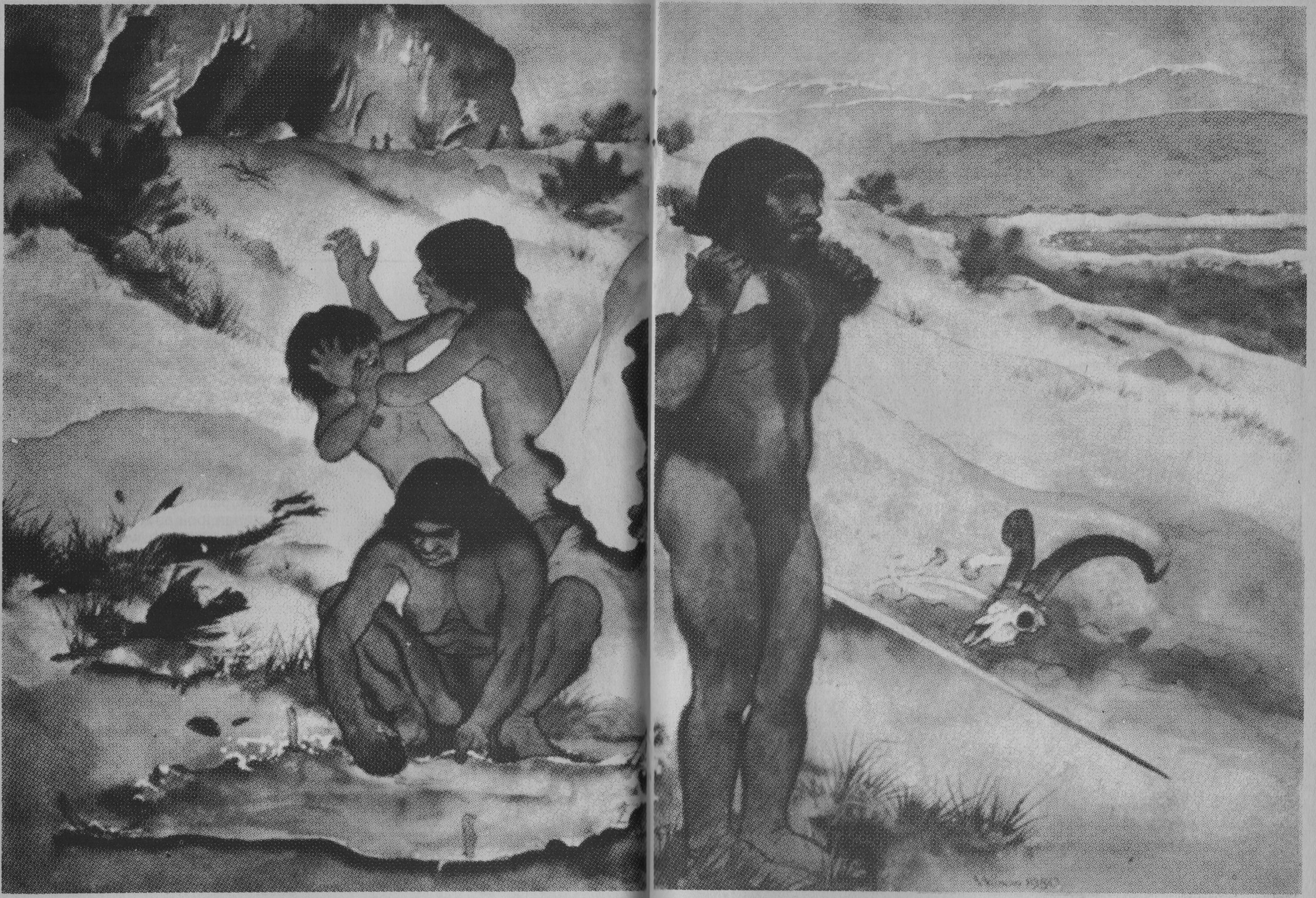
To make things worse a curtain of skins hung over the cave entrance, "I suppose they would rather suffocate than freeze to death," remarked the Doctor, who in any case had a remarkably sensitive nose.

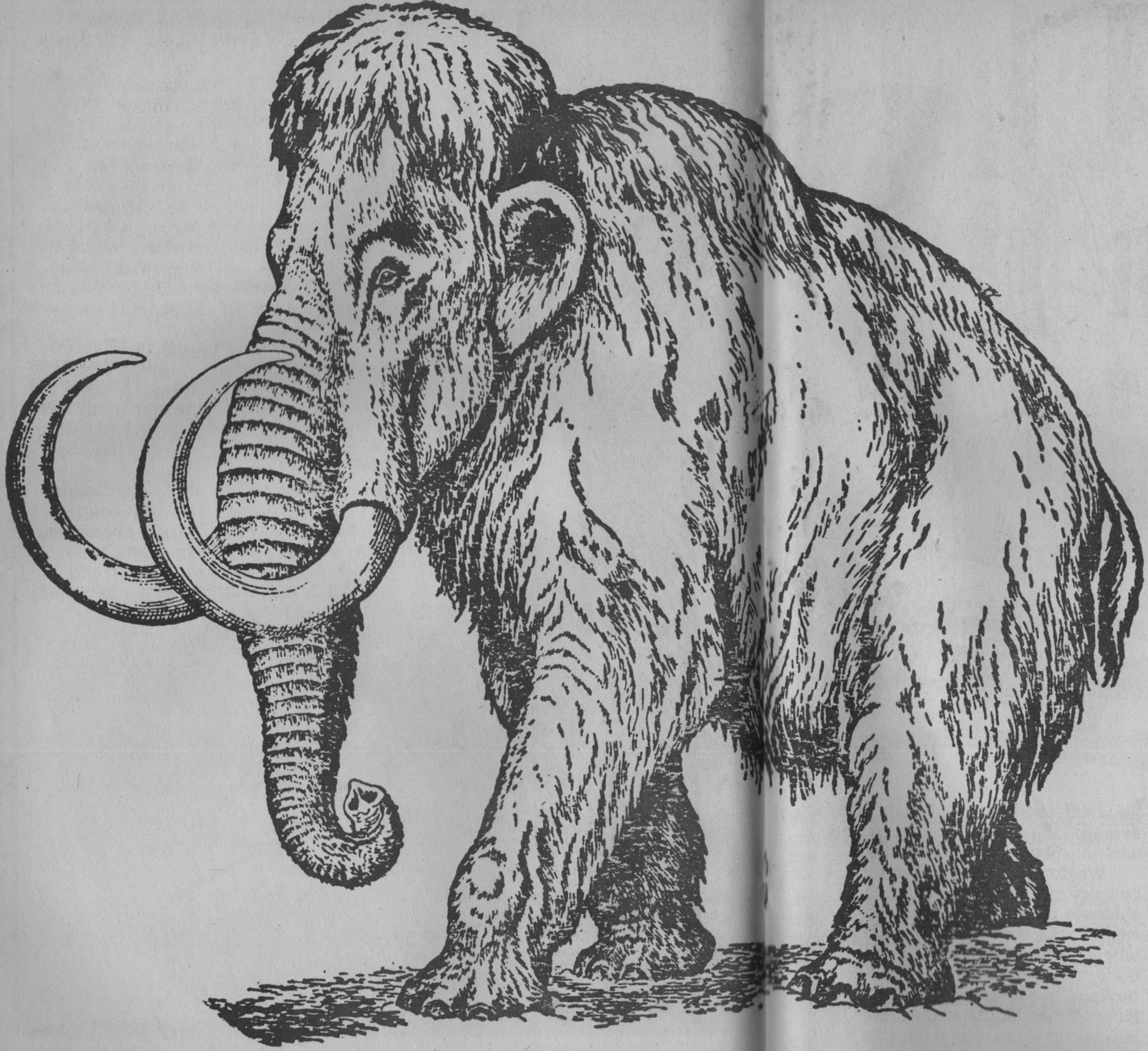
Inside a number of the men were at work making flint tools, of which Neanderthal man had a great variety. These implements are today called Mousterian tools after the cave of Le Moustier in south-west France, where many remains have been found.

The tools were not at all like the roughly made hand-axes of earlier times, but were delicately fashioned to serve different purposes. Some were used to scrape the animal fat from skins before making them into clothing, others to skin the animals themselves.

There were tools made from the flint flakes, and one Neanderthal man was busy lashing a pointed flake to a wooden handle with a 'cord' of animal skin.

Suddenly the Doctor noticed that the man who had been standing at the cave entrance was waving his stick. For a moment the Doctor wondered whether he should wave back! But that would have been foolish, since the Doctor and the Tardis were out of sight behind some trees. The Doctor turned to see what the





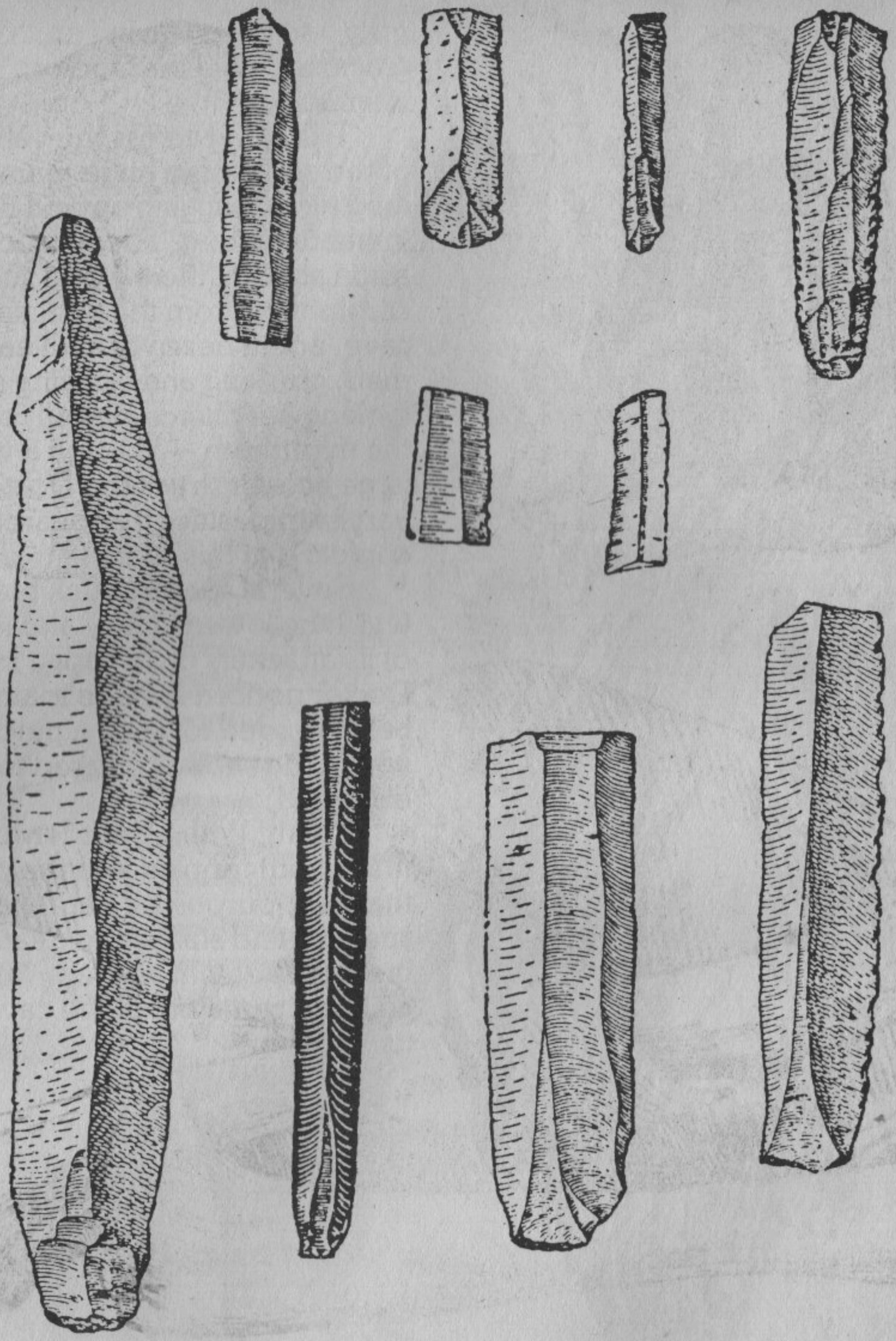
man had been waving at. "Good gracious," said the Doctor. "How very interesting."

Trundling across the valley in front of the cave was a huge mammoth, its long tusks wagging up and down as it lumbered along. To the Doctor's astonishment there was a sudden commotion from the direction of the cave, and a dozen or so Neanderthal men, grunting and carrying spears and looking very fierce indeed, charged at the mammoth. Although it was a very large beast it struck the Doctor as being very stupid, since it appeared to become confused at this attack.

Several spears struck the monster, which bellowed in fury and impaled one of its attackers on its tusks. However the Doctor noticed that the mammoth was being herded towards a patch of ground where the snow appeared to have been disturbed.

Crash! With a thunderous roar the mammoth toppled into the pit dug for that very purpose. There the beast was speared and stabbed to death, amid great excitement as the women and children came out of the cave to witness its dispatch.

A woolly mammoth which lived in Europe during the Great Ice Age.

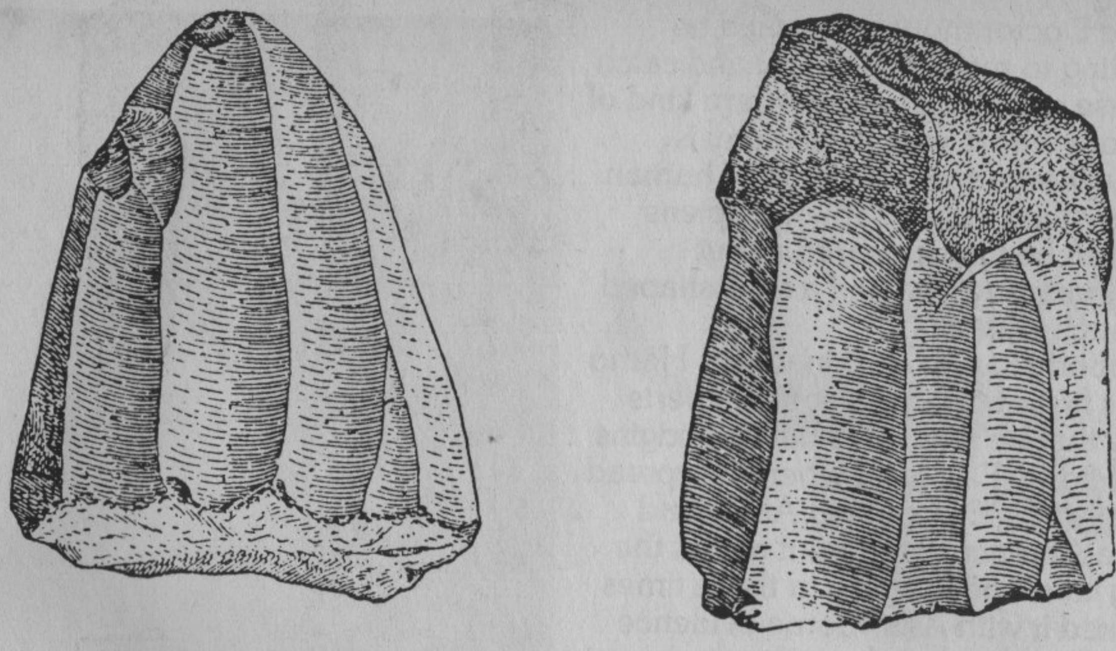


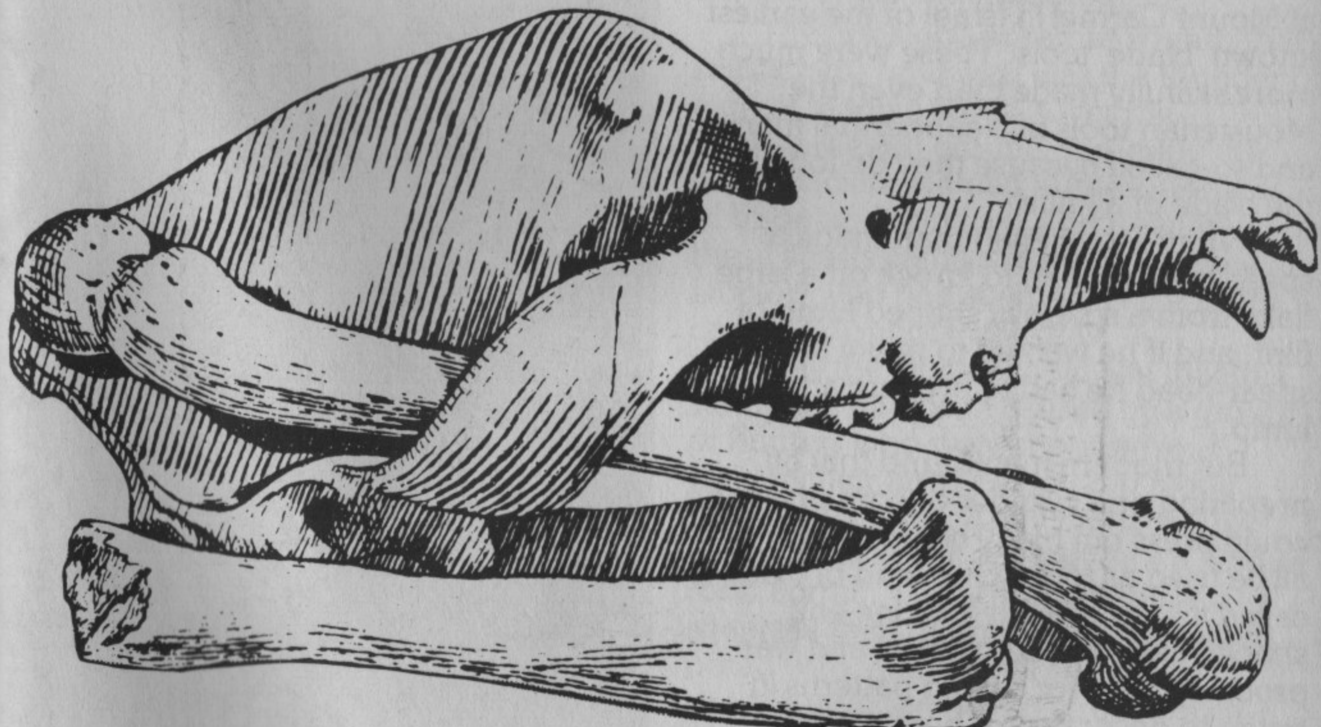
"Well, well," said the Doctor, "There will be a few cases of primitive indigestion this evening after they have stuffed themselves full of mammoth meat."

As it happened indigestion was the least of early man's problems. Far worse, it seems, was the toothache from which he suffered; many of the skulls which have been found show that his teeth were badly decayed and worn, and some had abscesses at the roots.

The older people also appear to have suffered from arthritis, though the average life-span of Neanderthal man was only twenty-five to thirty years.

We do not know whether he believed in gods or magic, but there is evidence that he buried his dead carefully. Graves have been found where flowers were placed beside the body; others were buried with what were probably treasured belongings, a trusty flint or bone club. They may even have believed in some kind of life after death if, perhaps, the bison bone found in one grave was intended to provide food for the next world.





One of Neanderthal man's most dangerous enemies was the cave bear, which when it was aroused stood eight feet high on its hind legs. Killing a cave bear required courage, and five bear skulls found in a specially built stone chest in a cave in Switzerland suggests that early man prized these trophies in the same way as the veteran soldier treasures his campaign medals.

Around 35,000 years ago Neanderthal man disappeared, and nobody quite knows why. But like an actor on cue, his exit set the scene for the arrival of Modern man.

A selection of modern man's tools, opposite, which were shaped like modern chisels. At the top of this page are two flint cores from which these tools were made. Above: The skull and bones of a cave bear.

The Doctor thought it would be interesting to move on and try and catch a glimpse of one of these modern kind of men from whom everyone today is directly descended. This type of human being is called Homo sapiens sapiens, and when he first appeared about 35,000 years ago he had a skull shaped very much like ours.

Nobody can be certain where Homo sapiens first evolved but some experts believe that he may have had his origins in the Middle East from where he spread gradually into Europe and Africa and into the American continent across the Bering land bridge which in those times still linked it with Asia. Some evidence for this theory comes from the discovery at Mount Carmel in Israel of the earliest known 'blade' tools. These were much more skilfully made than even the Mousterian tools of Neanderthal man, and so-called because they do look like the blade of a knife.

When Mousterian man made a spear-head he had to knock off a large flake from a specially shaped lump of flint, and if he wanted to make another spear-head he had to prepare another lump.

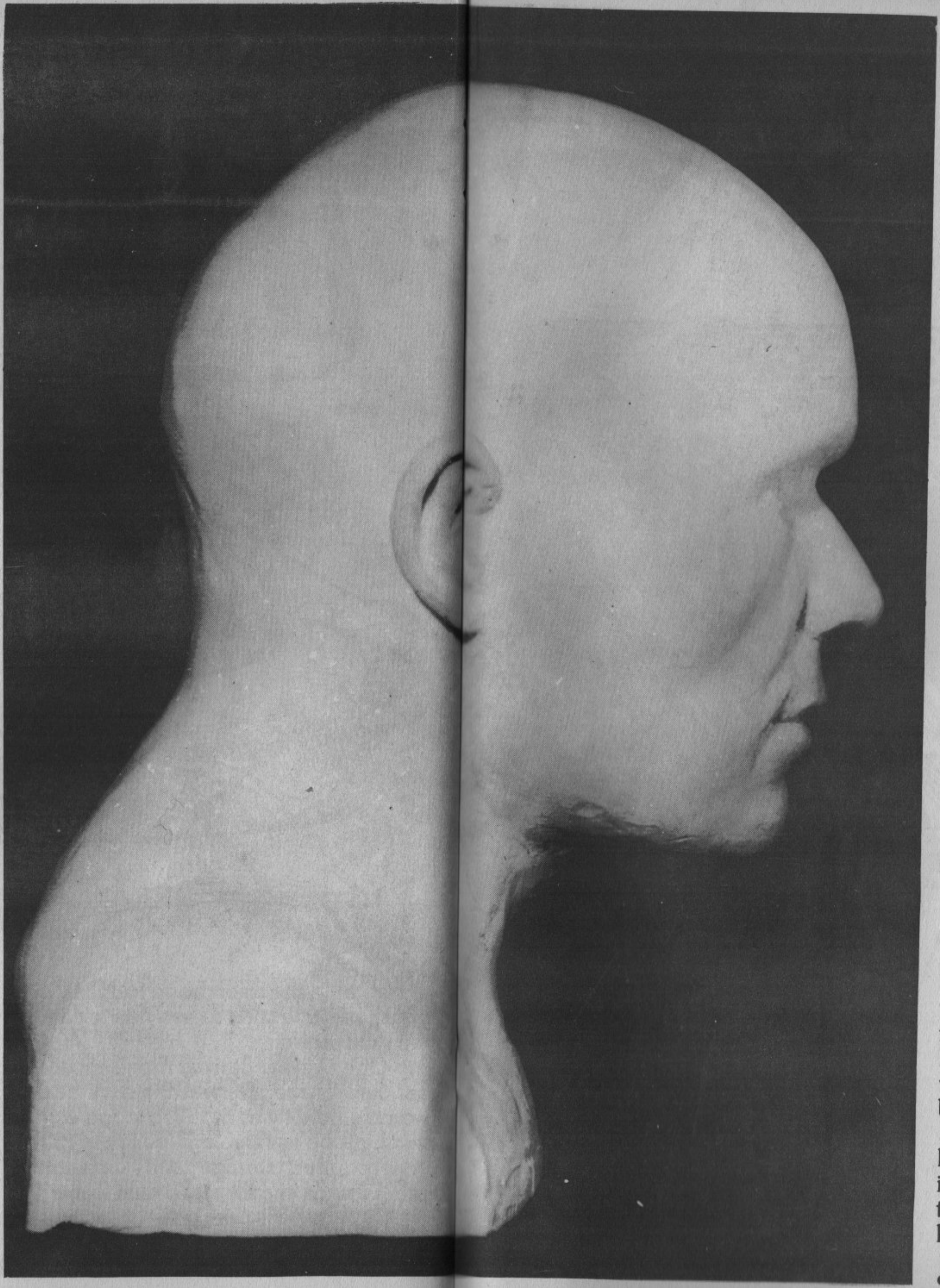
But modern man found that by preparing one cylinder or core of flint he could press out many blades which could all be used as tools. One kind of blade is called a burin, which has one end shaped like a modern chisel and was probably used for cutting patterns in antler to decorate it. There were sharp-pointed blades called borers, used to make holes in bone, wood shells or skin and there were circular-shaped scrapers which were useful for removing fat from animal skins.

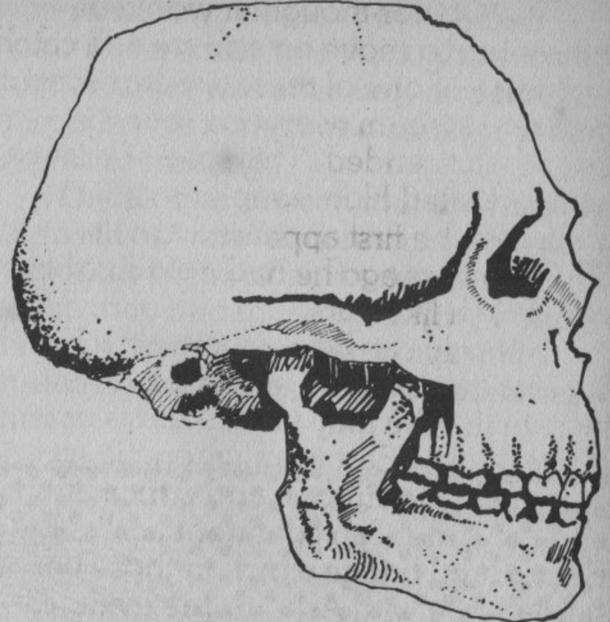
When the Doctor, on the trail of modern man, landed in Europe he found it was quite cold. In fact it was during the very last of the cold periods of the great Ice Age, known as the Wurm Glaciation, but as the Doctor discovered almost at once; the superior intelligence of Homo sapiens had enabled him to survive in the cold climate.

The first sight, or rather sound, that struck him, however, was the thunder of a great many hooves. Over the frost-hardened ground bordering the great glaciers roamed numerous herds of bison and reindeer, and now many of these beasts came streaming past the Doctor, who had stepped a little too carelessly out of the Tardis.

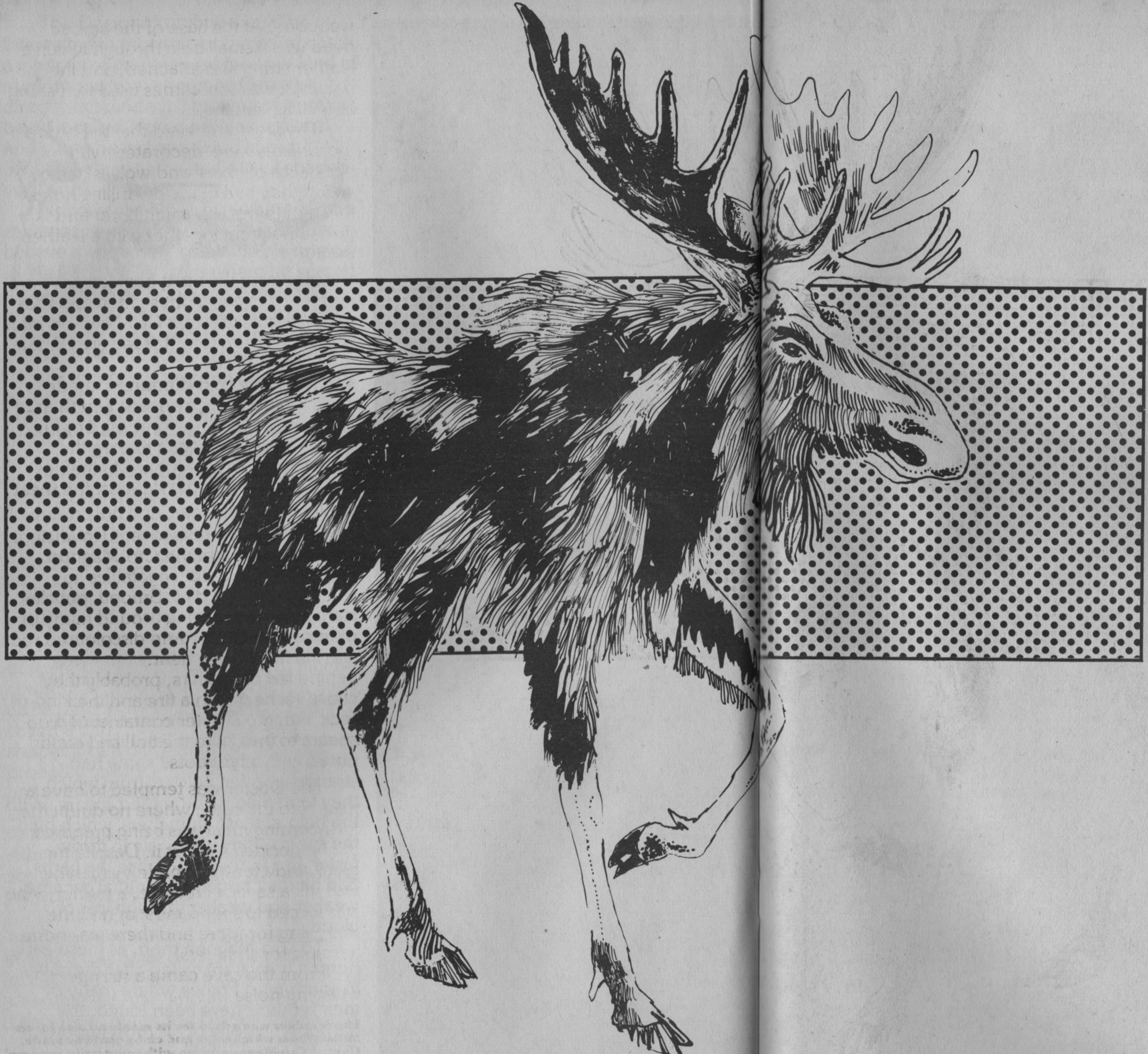
Now the Doctor could see that this stampede had been caused by a group of hunters who were shouting and waving their arms as they ran along behind the herds. They managed to chase some of the animals into a kind of rock 'corral'. There the men hurled spears at their quarry, and the Doctor noted with interest that some had strange wooden holders from which they launched barb-headed spears. With the help of these 'launchers' which held the spears, they were able to throw faster and further, and once the barbs had hit their target, the animal became weaker and weaker through loss of blood.

To Cro-Magnon man, as these early human beings are called after the caves in south-west France where many of their remains have been found, the harpoon was one of his most important





Cro-Magnon man and skull.



weapons. At the base of the barbed head was a small hole through which a leather string was attached, and the harpoon was sometimes used for fishing as well as hunting.

The Doctor noticed that the hunters themselves were 'decorated' with necklaces of foxes' and wolves' teeth, which they had made by drilling holes through them with a flint borer and threading them together with a leather thong.

However the most obvious difference between these men and their predecessors was that Cro-Magnon man was dressed-up to withstand the climate in which he lived.

They wore thick 'anoraks' made from fur, and long trousers, and their feet were covered in some kind of fur boots. Now they began to drag the bodies of the reindeer back to their caves, where they would roast the meat on a spit.

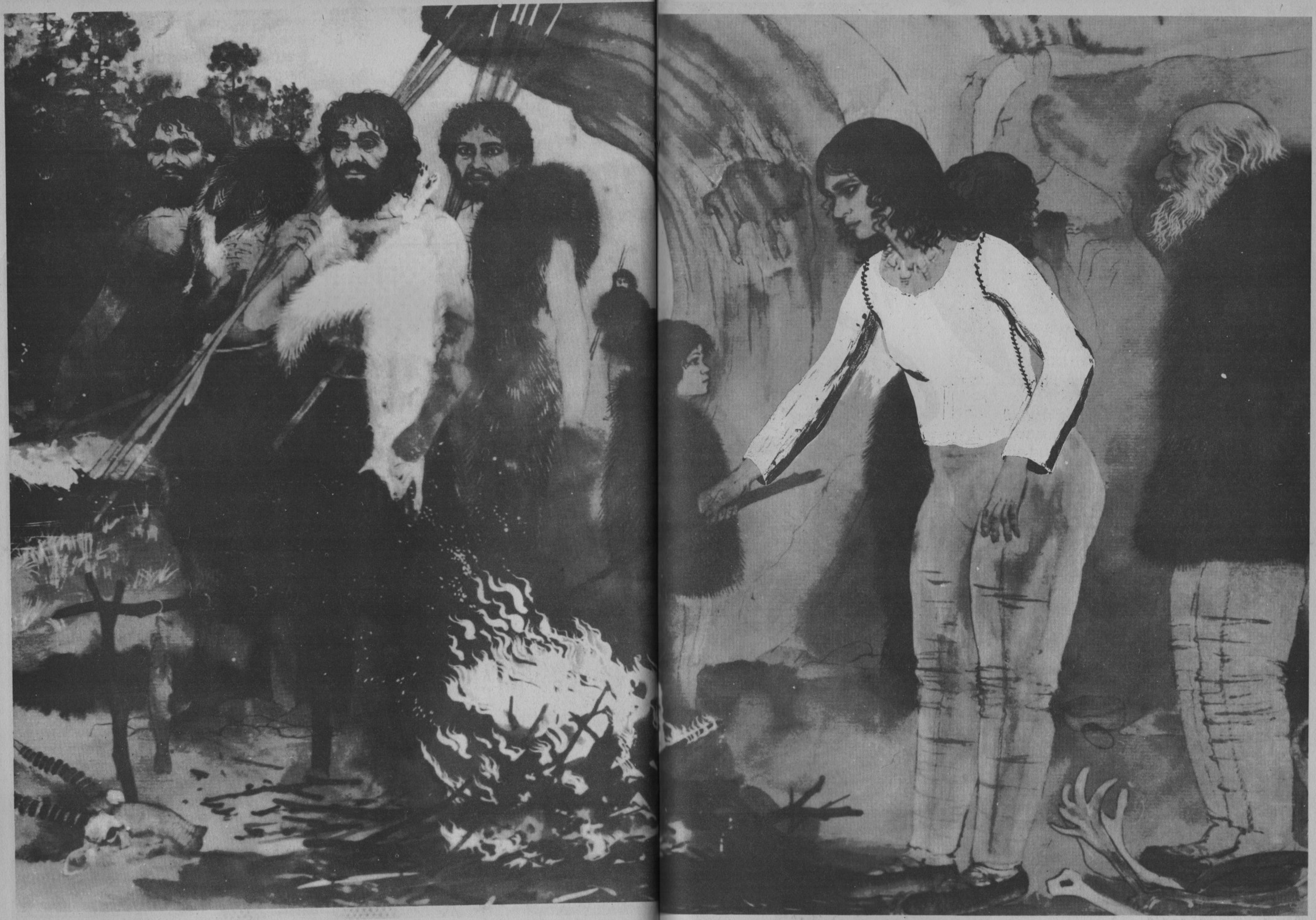
From remains discovered in ancient caves it seems that the Cro-Magnon people also cooked 'vegetables' to supplement their diet. Smooth pebbles have been found lying around many of the hearths, broken and discoloured red and black from the heat.

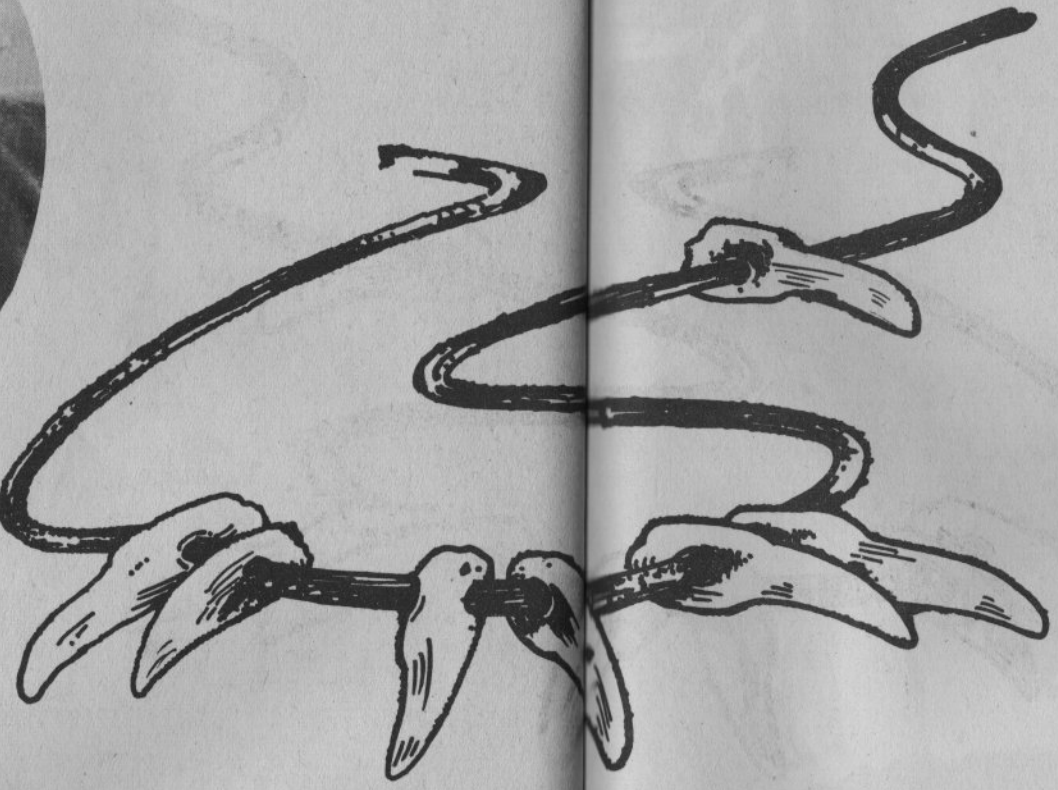
Called pot boilers, probably they were first heated in a fire and then dropped into a water container of wood or skin to bring it to the boil and cook plants and other roots.

The Doctor was tempted to have a peek into the cave, where no doubt the forthcoming meal was being prepared but he decided against it. Despite the great stride forward made by man he was still a savage creature, a hunter, who was forced to spend most of his time searching for food; and there was none to spare for strangers!

From the cave came a strange whistling noise.

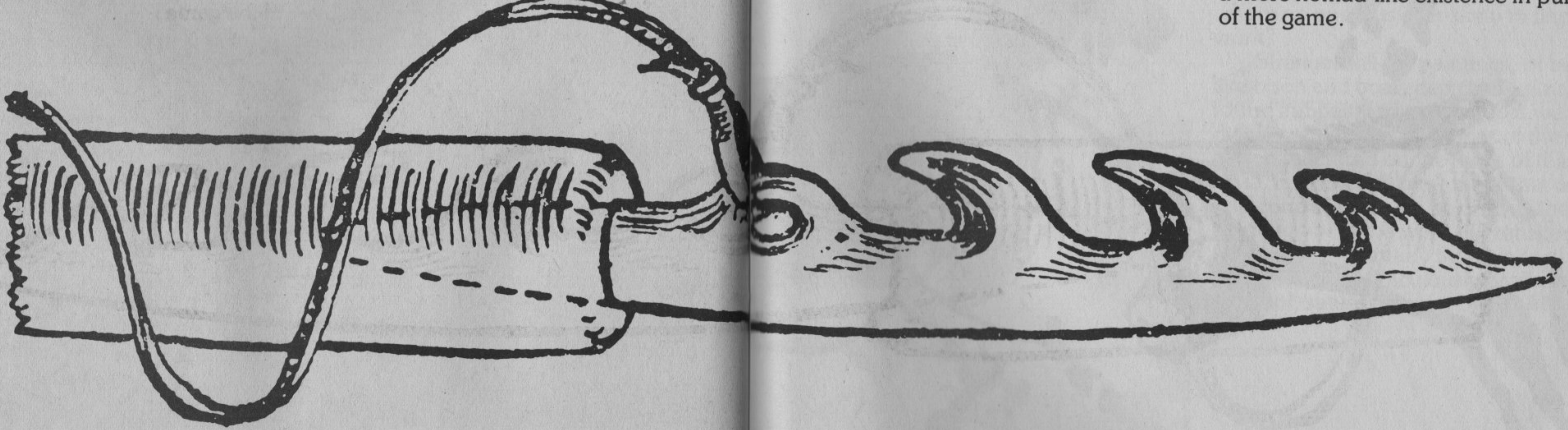
The reindeer was prized for its meat and also for its antlers from which tools and clubs could be made. Over: A Cro-Magnon group with some quite 'modern' clothes.





"Good gracious, what kind of animal is that?" wondered the Doctor. But after a moment or two he realised it was a Cro-Magnon 'concert' in full swing. The pipes and whistles of these people have been found and now the Doctor was in ear-shot of Stone Age man entertaining himself. After thousands of years of evolution primitive man had won the battle against his hostile environment sufficiently to find time for pursuits that were not concerned directly with basic survival.

Probably not all the reindeer meat which had just been caught would be consumed at once, and some of it could be buried in the frosty ground and eaten at leisure over the next few days.
In summer, when the reindeer and other beasts moved north, the Cro-Magnon hunters of Europe would probably follow, abandoning their caves for a while to live a more nomad-like existence in pursuit of the game.



Cro-Magnon man made himself necklaces from the teeth of wild animals and harpoons from their bones.

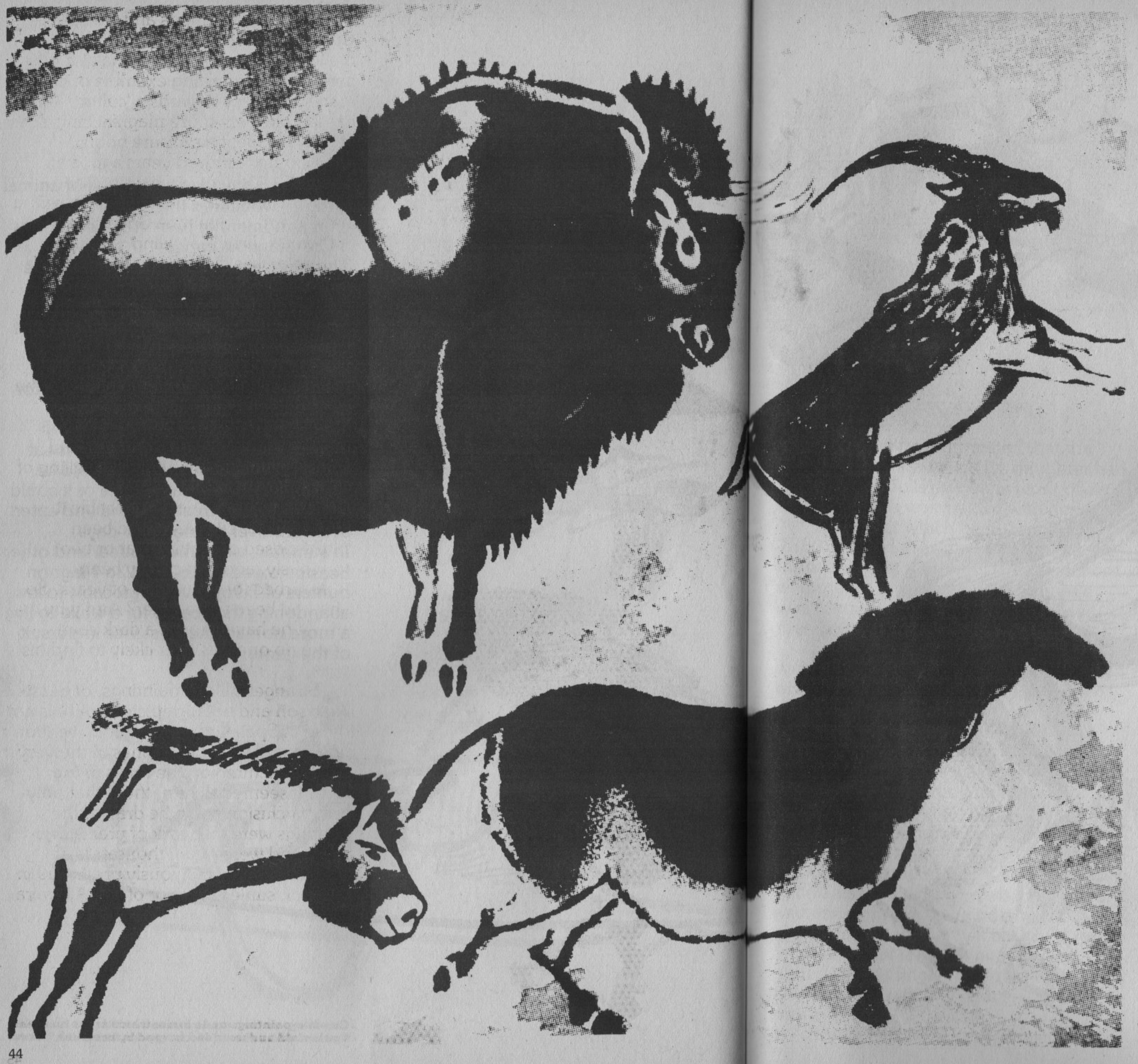
But while the pipes and whistles of Cro-Magnon man, carefully honed from the leg bones of birds and small animals, provide an interesting example of early man's first steps towards a 'culture' he has left us much more magnificent traces of how he spent his leisure hours.

About a hundred years ago, and almost by accident, an extraordinary discovery was made in a cave at Altamira in the north of Spain. A Spanish nobleman, Don Marcelino S. de Sautuola, was digging out the cave in a search for prehistoric remains when his 12-year-old daughter Maria, whom he had taken along, went off to explore the cave on her own.

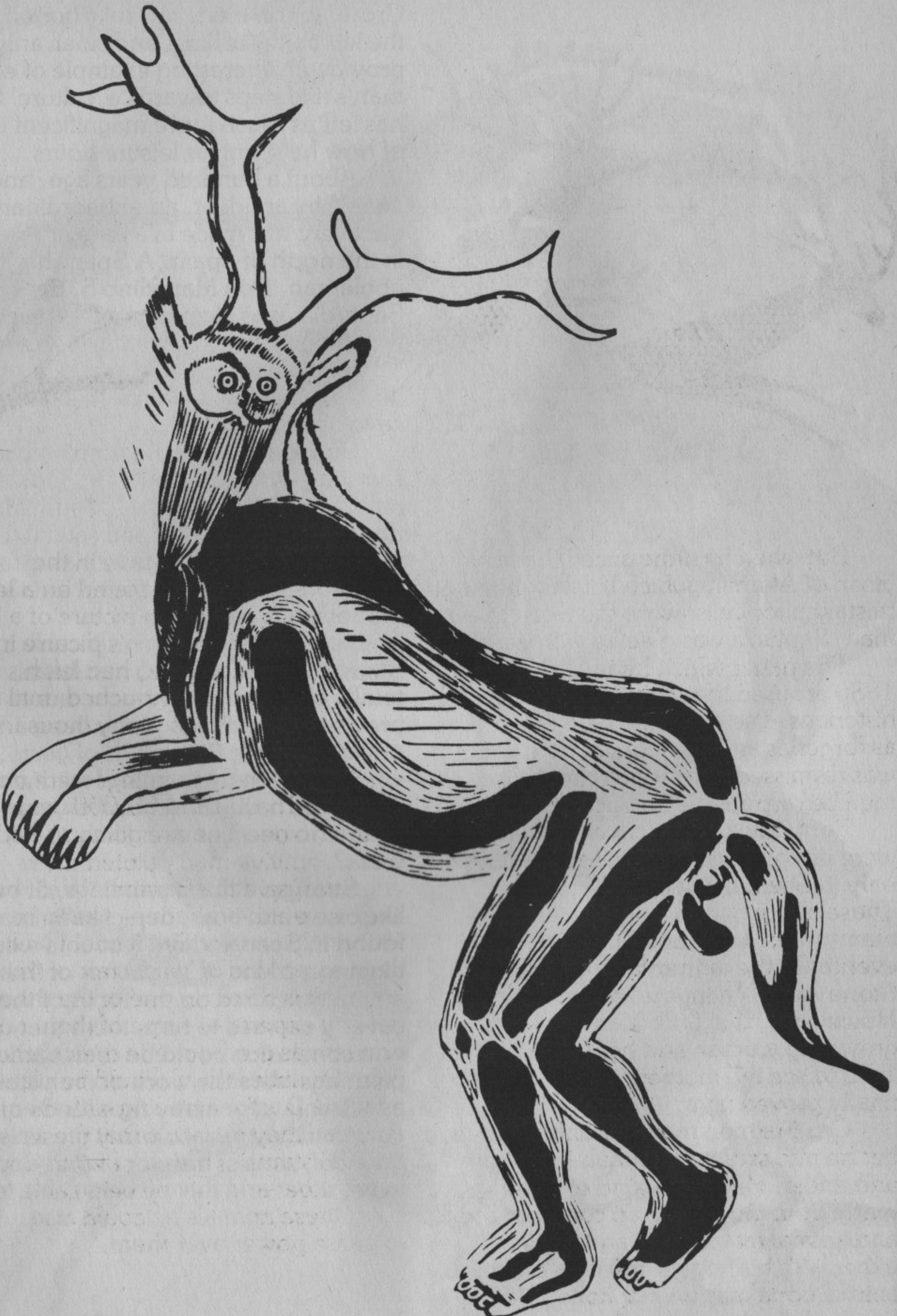
Suddenly she came running back, shouting: "Bulls, father. Oh, look at the bulls." Sautuola went to the spot his daughter showed him and saw, to his utter amazement, the most beautiful coloured paintings on the rock ceiling of the cave.

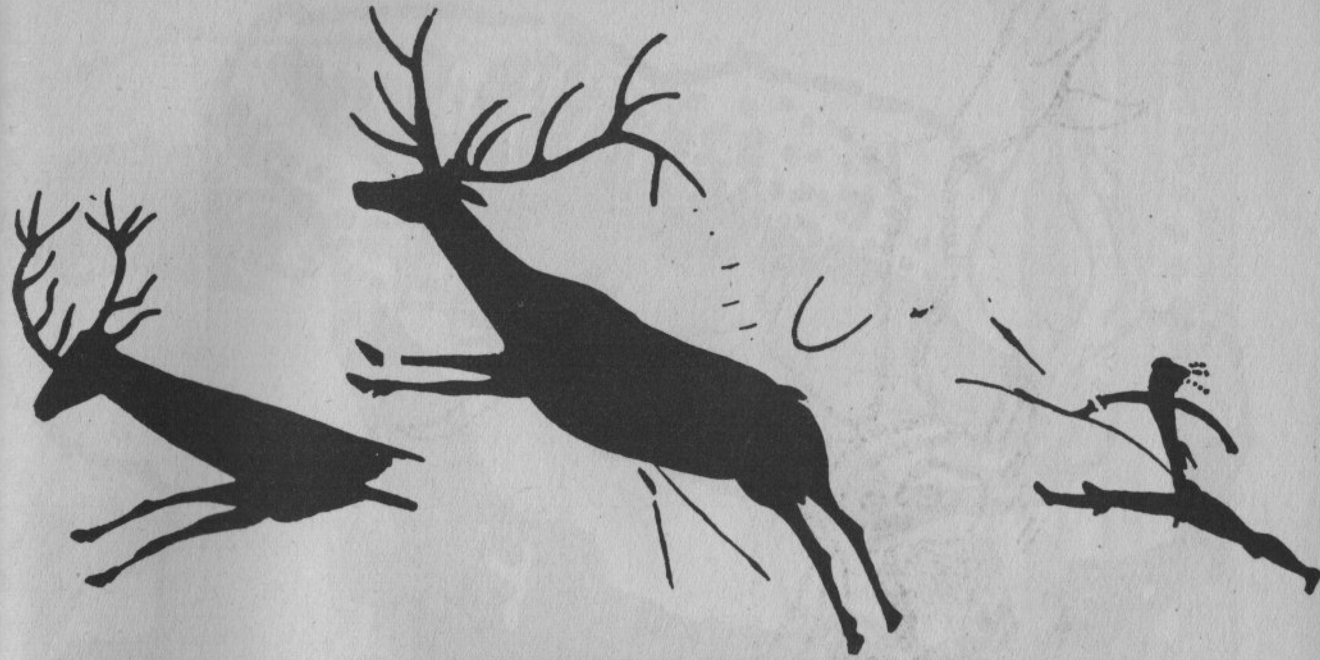
How strange and inexplicable it seemed. The cave itself had been totally closed off until a year or two previously, and had clearly been undisturbed for thousands of years. So who had been this painter? And why should he have chosen a dark cave where no one was ever likely to find his work?

Stranger still the paintings, of beasts like bison and boar, depicted animals not found in Spain today. Sautuola went on digging and found the bones of the very animals pictured on the rocks of the cave. It seemed to him, then, that only one conclusion could be drawn: the paintings were the work of prehistoric artists and were many thousands of years old, but miraculously preserved in the cool, sunless interior of the Altamira cave.



The cave-paintings at Altamira which are thousands of years old and were discovered by accident.





But when he announced that the bison of Altamira which his daughter had mistaken for bulls, were the work of early man, Sautuola was greeted with derision.

The paper which he published in 1880 aroused the scorn of scientists and historians. The paintings were denounced as forgeries and the work of Sautuola was dismissed. How could uncivilised men be responsible for such art?

Fortunately other cave paintings were discovered several years later, not only in Spain but in parts of France. These also pictured extinct animals — mammoths, for example — and eventually the authenticity of these Stone Age paintings was accepted. However by that time Maria was a grown-up woman and her father never lived to see the moment when he was finally proved right.

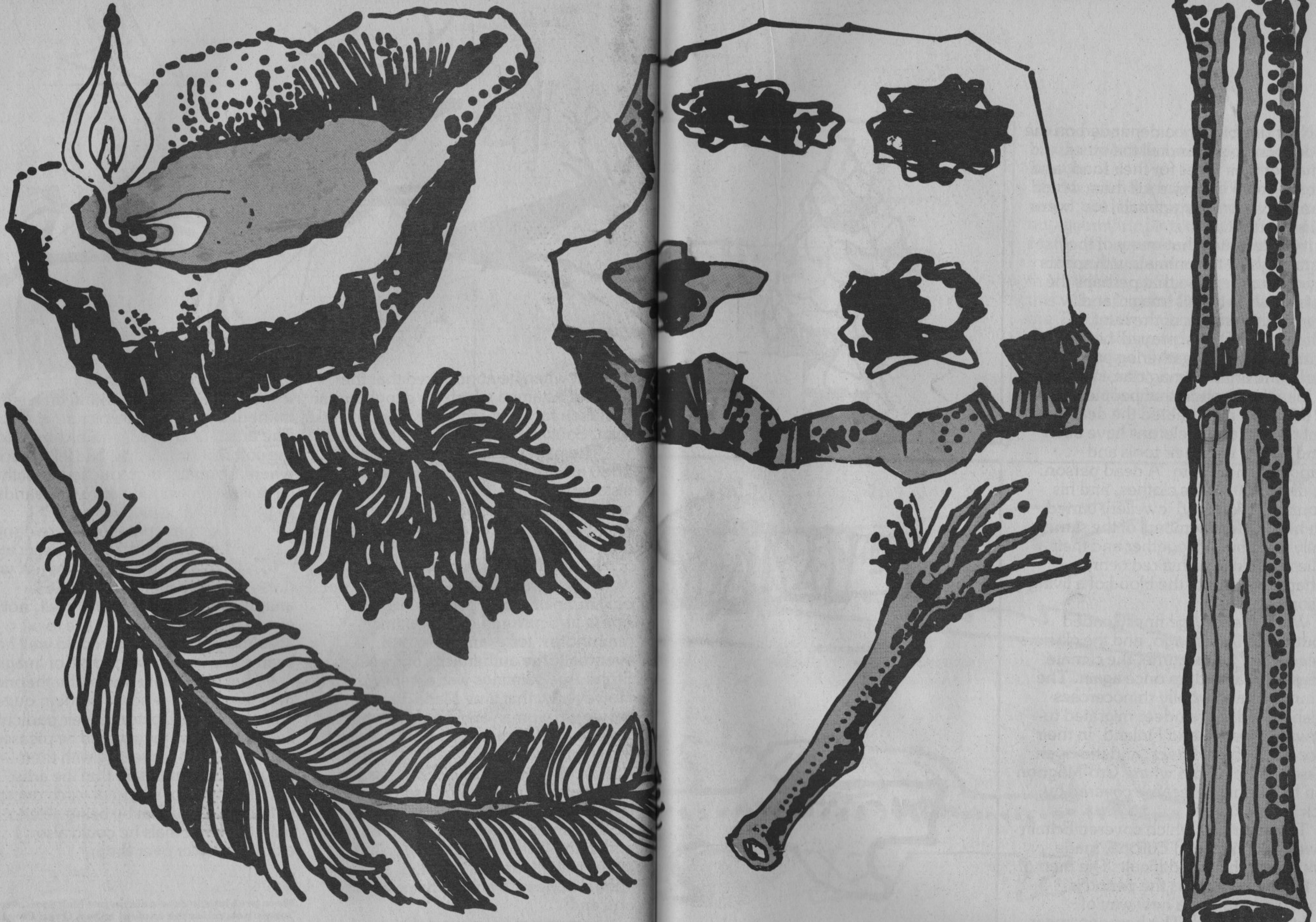
Cro-Magnon man not only painted, but he also sculpted animals from bone and antler. He used a kind of paste made from ground down coloured rocks and animal fat for paint and applied it either with his fingers or with a brush of animal bone with animal hairs stuck at one end.

Sometimes he engraved instead, and at Trois Freres, a cave in the Pyrenees, a burin was found on a ledge immediately beneath a picture of a lion. The artist, after cutting his picture into the soft limestone rock, had left his tool where it remained untouched until the cave was discovered many thousands of years later!

Most of these paintings were done between 15,000 and 25,000 years ago. "Now I expect you are going to ask why these primitive men painted these animals," said the Doctor. "Well, not even I would — ahem — like to be absolutely certain. But it could well have been some kind of 'witchcraft' or 'magic'."

That is certainly one of the theories held by experts — some of them quite as eminent as the Doctor in their particular field. Doubtless they would be pleased to hear the Doctor agreeing with them. Anyway they maintain that the artist had the status of a kind of witch doctor in the tribe; and that by being able to paint these animals he could also exercise power over them.

More prehistoric cave-paintings which probably had 'magic power' for the ancient tribes. Over: Painting implements used by early man.



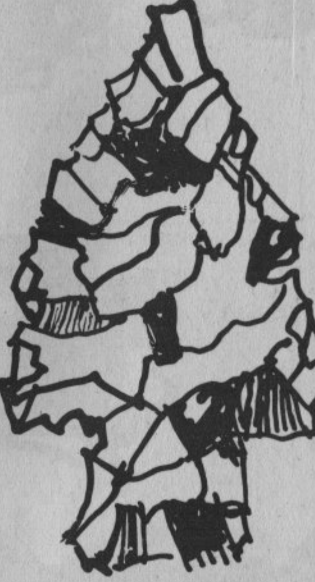
Now since the tribe depended on the reindeer and bison and all the other wild animals of their times for their food, and since failure to hunt and kill them would mean starvation, the animals, too, were very important.

It is interesting that many of the paintings show the animals with spears sticking into them, so that perhaps the artist was showing his 'magic' and ensuring the success of the hunt. Perhaps the hunters 'prayed' before the paintings in a ritual gathering presided over by the artist or 'magician-in-chief'.

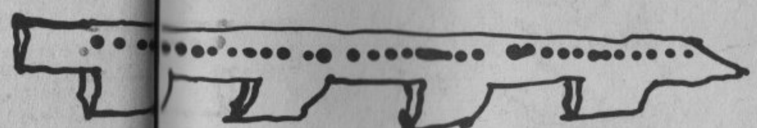
Like the Neanderthal people, Cro-Magnon man treated the dead with great respect and skeletons have been found buried with their tools and weapons beside them. A dead person was dressed in all his clothes, and his favourite trinkets and jewellery buried with him. Often members of the same family were buried together and their bodies sprinkled with a red ochre — perhaps to simulate the blood of a living person.

When the Ice Age finally ended about 10,000 years ago, and the glaciers receeded for the last time, the climate in Europe warmed up once again. The mammoths and woolly rhinoceroses perished and the reindeer migrated to Norway, Sweden and Finland. In their place came the red deer, and the open grasses of the tundra where Cro-Magnon man had hunted, became covered by thick forests.

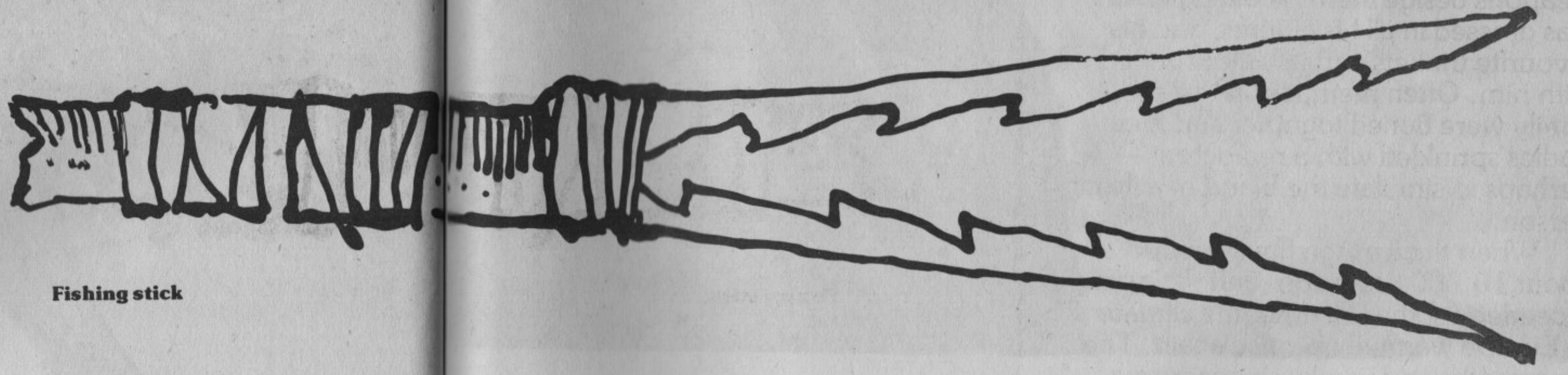
These forests, which covered Britain as well as continental Europe, made hunting much more difficult. The men of the Mesolithic age, as the period is known, had to find a new way of catching their food. The harpoon spear was no use in among the dense trees, but the trees themselves provided the answer.



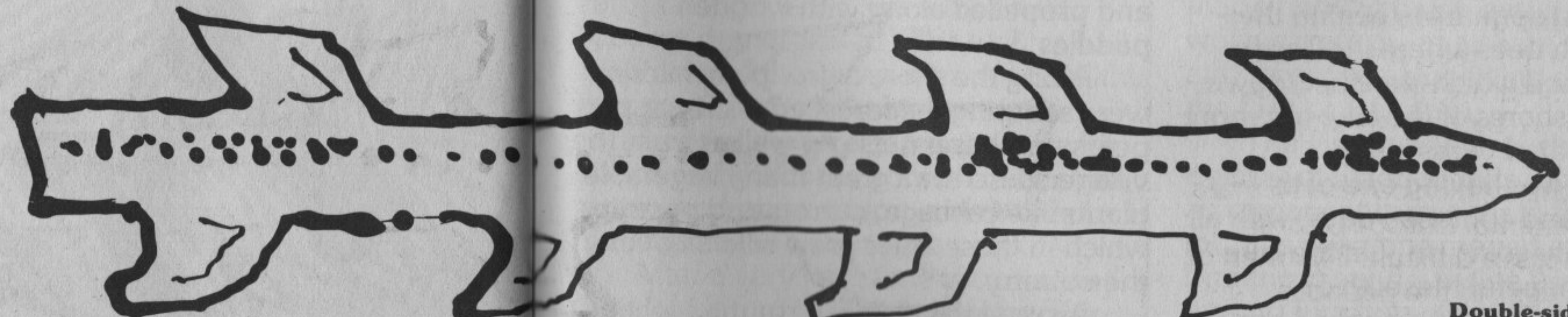
Flint arrow-head



Single-sided harpoon



Fishing stick



Double-sided harpoon

Mesolithic men made bows from the wood, and flint-tipped arrows. These tiny geometric flints are called microliths. Many of these microliths have been found at the site of a Mesolithic village in Yorkshire, at Star Carr. It was towards this village that the Doctor now guided the Tardis, through the thousands of years that separated the Cro-Magnon cave-dwellers, their pipes, and paintings, their fur jackets and boots, and the much more scantily dressed villagers of Star Carr.

It was a busy scene indeed that the Doctor looked upon from behind the screen of birch trees where the Tardis had landed, and which stretched down almost to the shores of the lake not more than two hundred yards away.

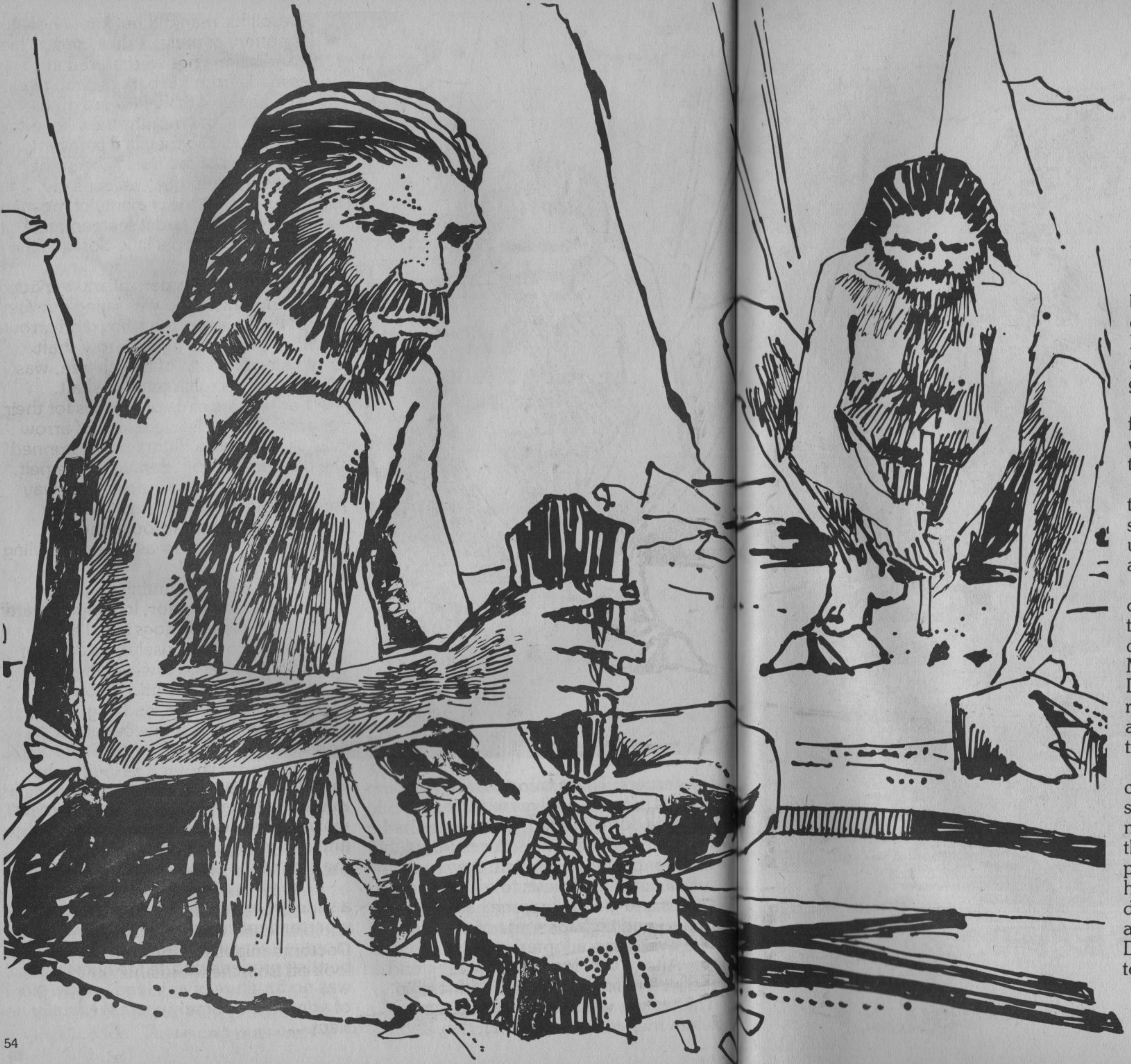
Star Carr was having one of its typical noisy and confused days, with all kinds of activity going on. On the lake itself several hopeful Mesolithic fishermen were lowering hooked bones on the end of leather thongs from their dug-out canoe. These dug-outs were crudely hollowed-out from tree-trunks and propelled along with wooden paddles.

Along the shore a group of children were scouring the forest edges for apples pears and hazel-nuts. As well as fruit, the villagers also ate a great many vegetable plants like cabbage, carrots and parsnips which in those times grew wild all over the country.

Around the children romped what struck the Doctor as exceedingly noisy animals which looked a bit like fox-terriers. These were, in fact, the earliest 'dogs' — wolves which had become domesticated. The wolves had lived around the camp-sites of Mesolithic man for centuries. At night they had come out of the forests to scavenge for scraps and gradually some had become tamer, and perhaps some of their cubs had even been adopted as pets.

After a very long time the men and the wolves forged a useful partnership. The wolves were good hunters, and when men took them along, they soon found the scent of a wild deer. That made hunting much easier. In return the wolves were given a share of the meat, and a comfortable resting place beside the fires of the camp.

The village itself was composed of a series of wooden huts, but it was not a permanent camp, for in the summer months everyone moved off to find new hunting grounds. Inside the huts there was no furniture of any kind, only a pile of skins in the corner where the family slept.



Mesolithic man did not know how to make pottery or metal dishes, and all his food and belongings were stored in boxes made from the bark of birch trees.

The banks of the lake were quite muddy during the months the villagers lived there, and so they laid pine bark over the floors of the huts to keep the worst of the damp out. As far as the Doctor could see the majority of the men were out hunting, and it seemed quite safe for him to creep a little closer to the village.

The Doctor was particularly intrigued by an older man who was sitting outside one of the huts making a bow and arrow. He had made a slit in the arrow shaft and, using the resin of a birch tree, was glueing the microlith into the shaft.

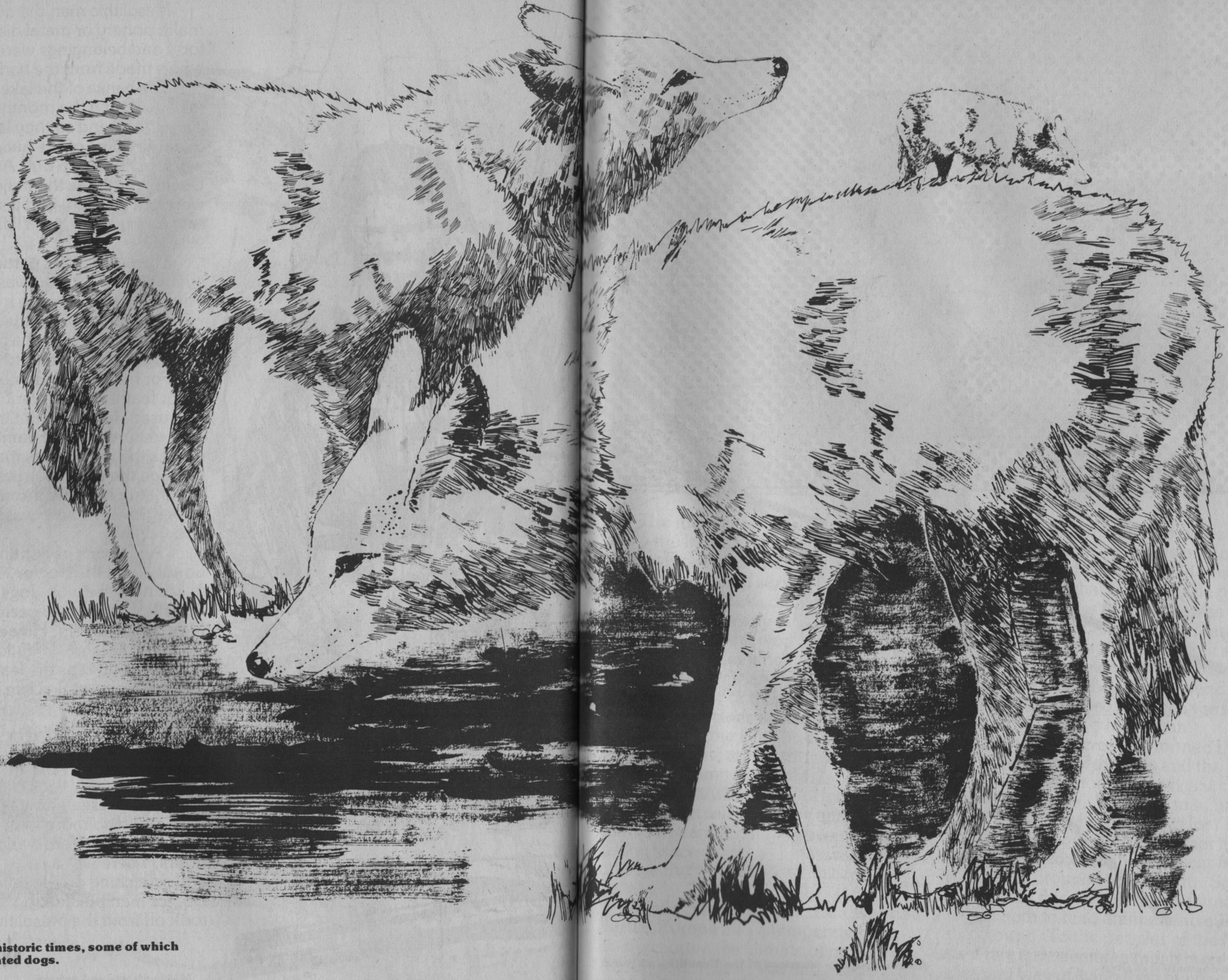
For hunting birds or animals for their fur or feathers a different kind of arrow was used. It had a blunt tip and stunned the creature without damaging the pelt.

As the Doctor was making his way through the fringe of trees he heard something crashing through the undergrowth. There was a loud growling and yelping.

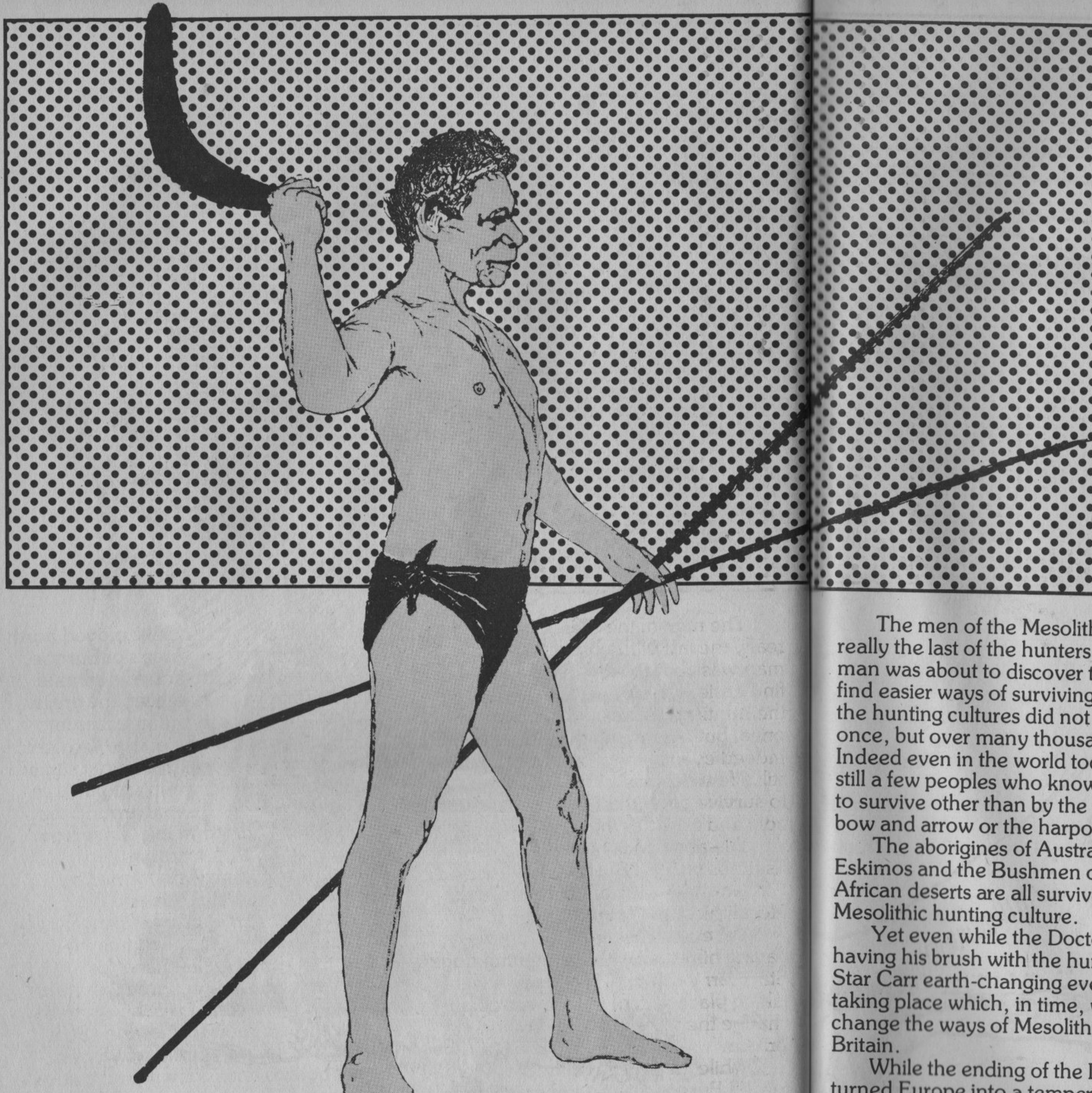
"Ah, a pack of hunting dogs, no doubt," said the Doctor, looking forward to seeing these wolf-dogs in full cry, doubtless followed closely by a band of Mesolithic hunters. However the Doctor's pleasurable anticipation was rudely cut short as the lead dog appeared and took a bite out of his trousers.

The Doctor shouted as loud as he could, and waved his arms about, which seemed to take the animal aback for a moment. Hastily the Doctor ran through the trees, pursued now by the entire pack. With no more than a yard to spare he reached the Tardis and shut the doors. There was a very nasty scrabbling and scratching on the outside as the Doctor manipulated the controls and took off from the Mesolithic age . . .

Making bows and arrows



The wolves of prehistoric times, some of which became domesticated dogs.



An aborigine – survivor of the Mesolithic culture.

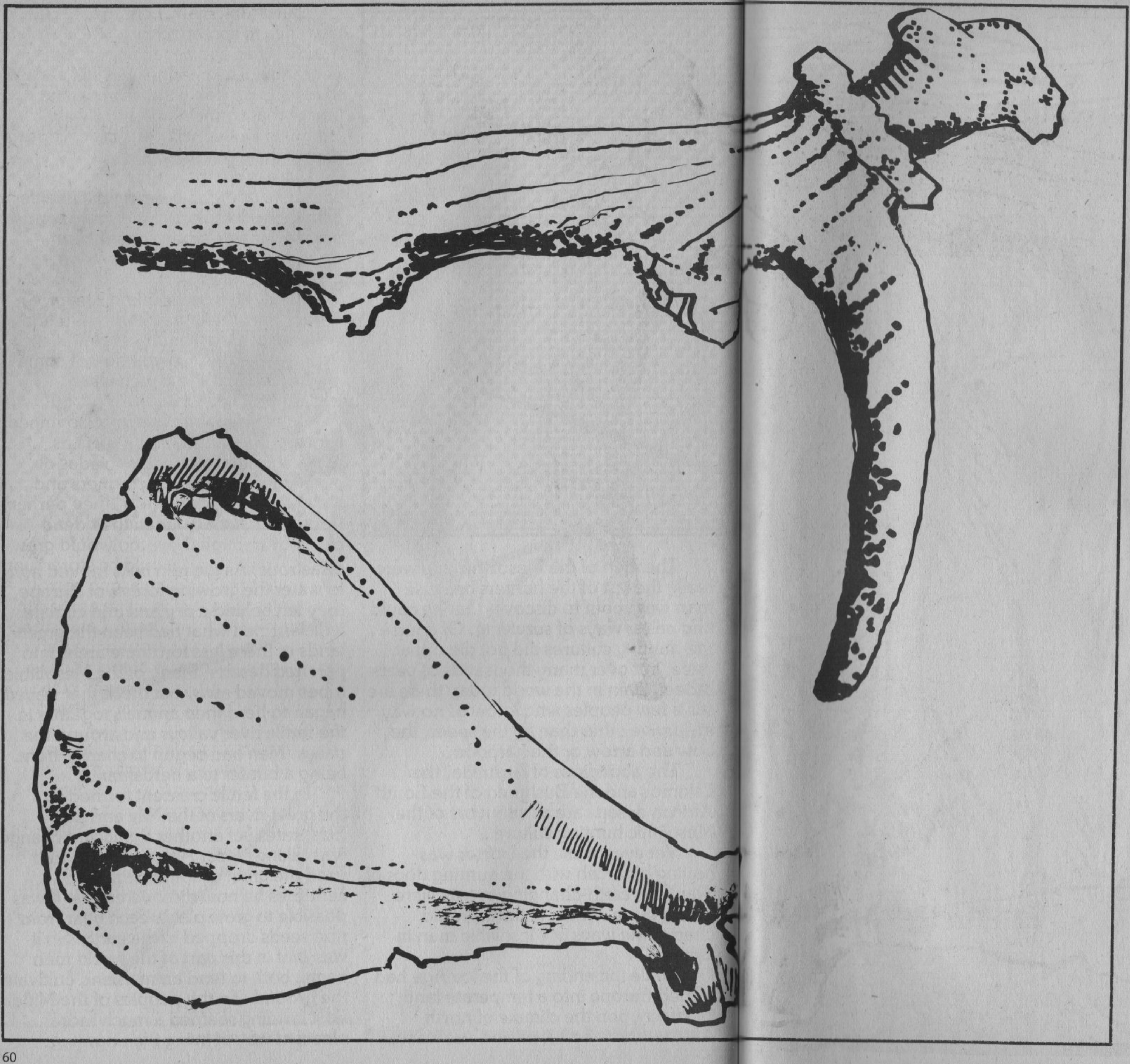
The men of the Mesolithic age were really the last of the hunters because man was about to discover that he could find easier ways of surviving. Of course the hunting cultures did not die out at once, but over many thousands of years. Indeed even in the world today there are still a few peoples who know of no way to survive other than by the spear, the bow and arrow or the harpoon.

The aborigines of Australia, the Eskimos and the Bushmen of the South African deserts are all survivors of the Mesolithic hunting culture.

Yet even while the Doctor was having his brush with the hunting dogs of Star Carr earth-changing events were taking place which, in time, would change the ways of Mesolithic man in Britain.

While the ending of the Ice Age had turned Europe into a temperate land, its effect upon the climate of north Africa, south-west Asia and Arabia was disastrous. As the rain belts moved north to water the growing forests of Europe, they left behind a dry and arid climate which turned what had been the green lands of these less fortunate areas into parched deserts. Many of the Mesolithic tribes moved away but those that stayed began to herd their animals together in the fertile river valleys and around the oases. Man had begun to change from being a hunter to a herdsman.

In the fertile crescent formed by the great rivers of the Nile and the Euphrates yet another significant change was taking place. Although man had used the grain of some plants for centuries he now discovered that it was possible to grow plants each year from ripe seeds dropped in the earth. So it was that in this part of the world man began both to tend animals and cultivate the ground. To the peoples of the Middle East farming seemed a much more pleasant way of living than hunting.



But it took many centuries for this new idea to spread to Europe. In Britain the Neolithic age began about 5000 years ago. The channel was still narrow then, and probably the narrow land bridge that connected France with Britain at Dover had only just collapsed before the rising seas.

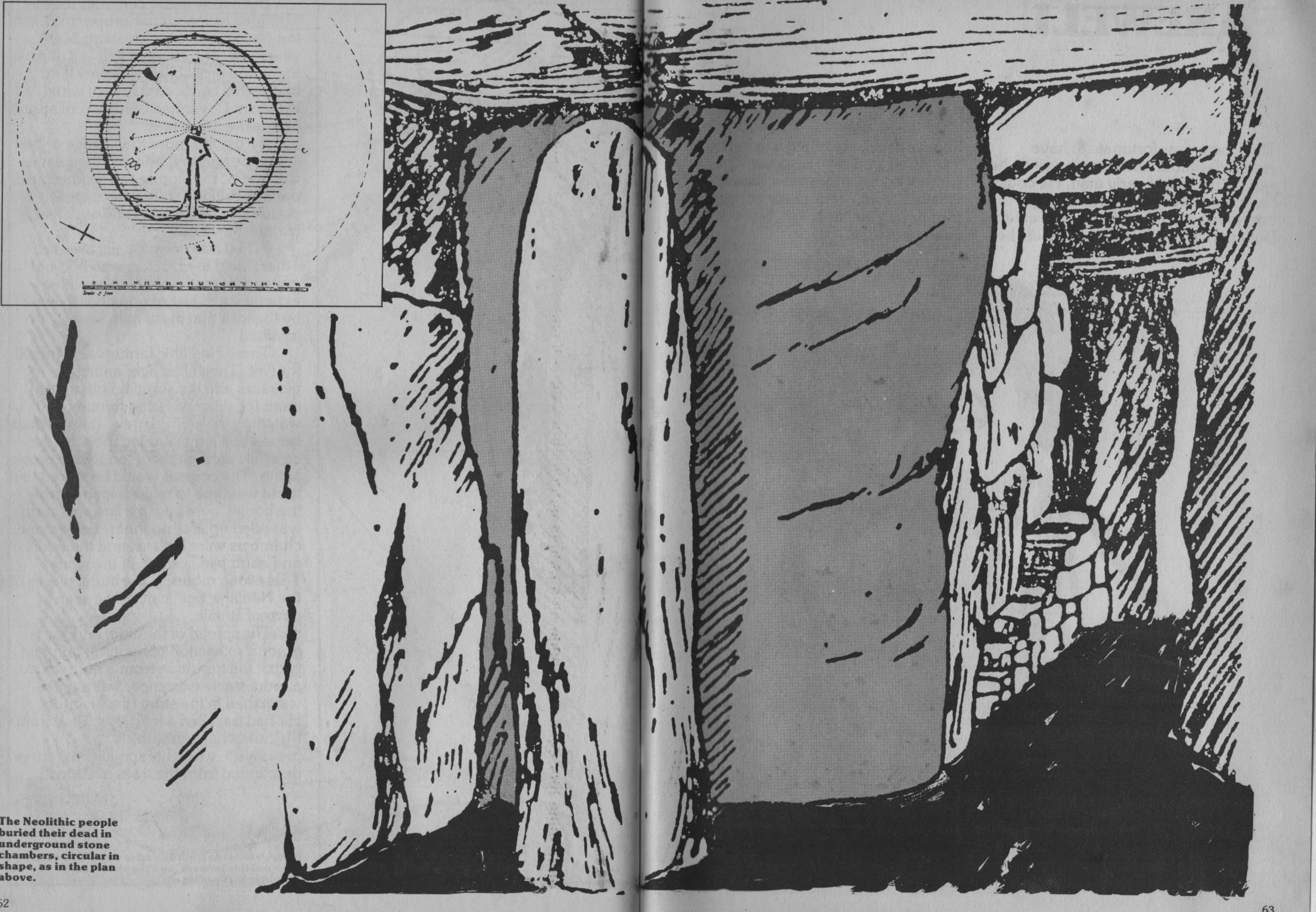
Across not more than a mile of sea came the farmers, bringing their cattle with them, to colonise the southermost parts of Britain. They constructed pounds for their cattle, and ate meat, barley and wheat.

"They also occasionally ate each other," said the Doctor, who had not quite recovered from his Mesolithic experience. "Just so you do not come by the idea that these men were 'civilised.' "

These Neolithic farmers also mined for flint. They used deer antlers as pickaxes and the shoulder blades of oxen for shovels. Being farmers and watching how things grew, they perhaps hoped that if they buried their dead carefully enough they, too,would grow again. The corpses would be stored until there was time to make a long barrow — the bodies were laid in a line and earth was piled up around them. Later stone chambers were built around the bodies and earth piled on top of the stones. These long mounds, the burial places of the Neolithic age, can still be seen in parts of Britain.

The spread of farming, and the gradual extinction of hunting, bringing with it the transition from a nomadic to a more stable existence, was a great watershed in the story of early man. He had travelled a long, long way from the time, many millions of years previously, when his ape-like ancestors descended from the trees of Africa.

A pick-axe made from an antler which was used by the Neolithic farmers, and the shovel made from the shoulder-blade of an ox.


Scale of feet

The Neolithic people buried their dead in underground stone chambers, circular in shape, as in the plan above.

FAREWELL

The Doctor was fortunate to have escaped without serious injury while he was on the trail of early man. He could have been savaged by wolf-dogs, trampled by mammoths or even eaten! But apart from a tear in his trousers he had, as usual, managed to survive.

"Well, you can't discover things without taking a chance or two," said the Doctor. "And I have really enjoyed this trip; hope you have, too. See you again soon. Goodbye."

Illustrations on pages 7, 10, 14, 24, 25, 26, 29, 30, 36 and 40 courtesy of the British Museum.

Twenty million years ago the apes began to descend from the trees. Millions of years later some learned to walk on two feet, and from these descended the earliest hominids.

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